US011481106B2

(12) **United States Patent**
Anzures et al.

(10) **Patent No.: US 11,481,106 B2**
(45) **Date of Patent: Oct. 25, 2022**

(54) **VIDEO MANAGER FOR PORTABLE MULTIFUNCTION DEVICE**

(71) Applicant: **Apple Inc.**, Cupertino, CA (US)

(72) Inventors: **Freddy Allen Anzures**, San Francisco, CA (US); **Gregory Christie**, San Jose, CA (US); **Scott Forstall**, Los Altos, CA (US); **Charles J. Pisula**, San Jose, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **17/330,930**

(22) Filed: **May 26, 2021**

(65) **Prior Publication Data**

US 2022/0038787 A1 Feb. 3, 2022

Related U.S. Application Data

(60) Continuation of application No. 14/043,788, filed on Oct. 1, 2013, now Pat. No. 11,023,122, which is a continuation of application No. 13/155,304, filed on Jun. 7, 2011, now Pat. No. 8,547,355, which is a division of application No. 11/850,008, filed on Sep. 4, 2007, now Pat. No. 7,956,849.

(Continued)

(51) **Int. Cl.**

G06F 3/0488	(2022.01)
G06F 3/04883	(2022.01)
G06F 1/16	(2006.01)
H04M 1/72403	(2021.01)

(52) **U.S. Cl.**

CPC ***G06F 3/0488*** (2013.01); ***G06F 1/1626*** (2013.01); ***G06F 1/1686*** (2013.01); ***G06F 3/04883*** (2013.01); ***H04M 1/72403*** (2021.01); *G06F 2200/1614* (2013.01); *G06F 2200/1637* (2013.01); *G06F 2203/04808* (2013.01)

(58) **Field of Classification Search**

CPC .. G06F 3/0488; G06F 3/04883; G06F 1/1626; G06F 1/1686; H04M 1/72403

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,305,435 A	4/1994	Bronson
5,347,295 A	9/1994	Agulnick et al.

(Continued)

FOREIGN PATENT DOCUMENTS

CN	1203679 A	12/1998
CN	1278340 A	12/2000

(Continued)

OTHER PUBLICATIONS

Advisory Action received for U.S. Appl. No. 11/961,773, dated May 1, 2013, 3 pages.

(Continued)

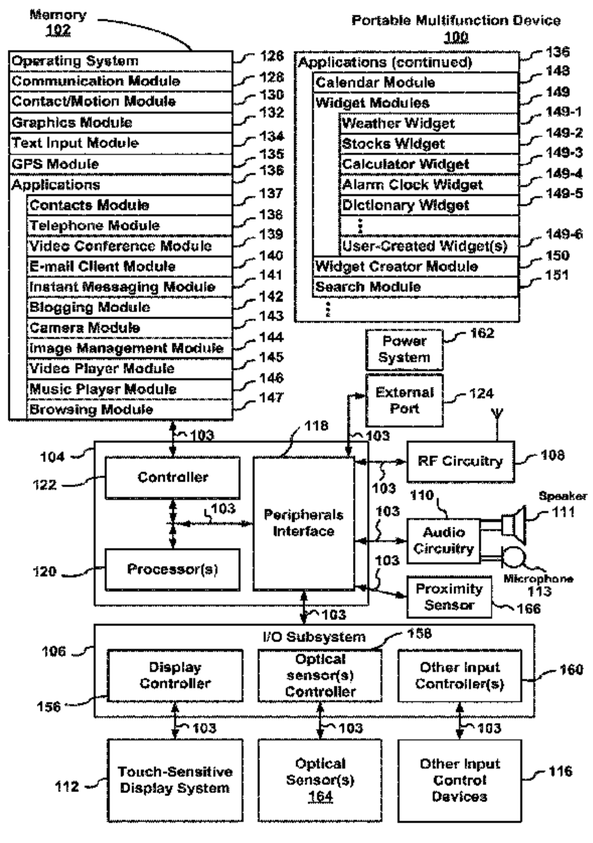
Primary Examiner — Seth A Silverman

(74) *Attorney, Agent, or Firm* — Dentons US LLP

(57) **ABSTRACT**

A video player for a portable multifunction device is disclosed. In some embodiments, a list of video items is displayed in a portrait orientation of a touch screen display of a portable electronic device. Upon user selection of a respective video item in the list, the user selected video item is automatically displayed in a landscape orientation of the touch screen display.

21 Claims, 15 Drawing Sheets



Related U.S. Application Data

(60) Provisional application No. 60/937,993, filed on Jun. 29, 2007, provisional application No. 60/946,973, filed on Jun. 28, 2007, provisional application No. 60/879,469, filed on Jan. 8, 2007, provisional application No. 60/879,253, filed on Jan. 7, 2007, provisional application No. 60/883,784, filed on Jan. 6, 2007, provisional application No. 60/824,769, filed on Sep. 6, 2006.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,347,628	A		9/1994	Welch et al.
5,388,197	A		2/1995	Rayner
5,404,316	A		4/1995	Klingler et al.
5,495,566	A		2/1996	Kwatinetz
5,513,342	A		4/1996	Leong et al.
5,519,828	A		5/1996	Rayner
5,521,841	A		5/1996	Arman et al.
5,557,724	A		9/1996	Sampat et al.
5,559,301	A		9/1996	Bryan, Jr. et al.
5,568,603	A		10/1996	Chen et al.
5,610,653	A	*	3/1997	Abecassis H04N 21/4728 386/E9.04
5,611,060	A		3/1997	Belfiore et al.
5,612,719	A		3/1997	Beernink et al.
5,614,940	A		3/1997	Cobbley et al.
5,682,326	A		10/1997	Klingler et al.
5,684,970	A		11/1997	Asuma et al.
5,692,213	A		11/1997	Harrison et al.
5,726,687	A		3/1998	Belfiore et al.
5,732,184	A		3/1998	Chao et al.
5,739,821	A		4/1998	Ho et al.
5,745,096	A		4/1998	Ludolph et al.
5,754,174	A		5/1998	Carpenter et al.
5,758,180	A		5/1998	Duffy et al.
5,760,767	A		6/1998	Shore et al.
5,760,772	A		6/1998	Austin
5,760,773	A		6/1998	Berman et al.
5,778,053	A		7/1998	Skarbo et al.
5,793,366	A		8/1998	Mano et al.
5,825,352	A		10/1998	Bisset et al.
5,828,370	A		10/1998	Demoney et al.
5,841,971	A		11/1998	Longginou et al.
5,864,868	A		1/1999	Contois
5,872,566	A		2/1999	Bates et al.
5,872,922	A		2/1999	Hogan et al.
5,874,958	A		2/1999	Ludolph
5,880,725	A		3/1999	Southgate
5,892,507	A		4/1999	Moorby
5,900,875	A		5/1999	Haitani
5,969,716	A		10/1999	Davis
5,999,173	A		12/1999	Ubillos
6,011,537	A		1/2000	Slotznick
6,025,842	A		2/2000	Filetto et al.
6,026,389	A		2/2000	Nakajima et al.
6,031,529	A		2/2000	Migos et al.
6,040,824	A		3/2000	Maekawa et al.
6,061,062	A		5/2000	Venolia
6,069,606	A		5/2000	Sciammarella et al.
6,072,503	A		6/2000	Tani et al.
6,073,036	A		6/2000	Heikkinen et al.
6,081,256	A		6/2000	Martin et al.
6,118,450	A		9/2000	Proehl et al.
6,133,916	A		10/2000	Bukszar et al.
6,166,736	A		12/2000	Hugh
6,177,936	B1		1/2001	Cragun
6,199,082	B1		3/2001	Ferrel et al.
6,204,840	B1		3/2001	Petelycky et al.
6,215,491	B1		4/2001	Gould
6,243,080	B1		6/2001	Molne
6,262,724	B1		7/2001	Crow et al.
6,262,732	B1		7/2001	Coleman et al.
6,297,795	B1		10/2001	Kato et al.
6,308,187	B1		10/2001	Destefano
6,313,855	B1		11/2001	Shuping et al.
6,317,784	B1		11/2001	Mackintosh et al.
6,326,970	B1		12/2001	Mott et al.
6,332,147	B1		12/2001	Moran et al.
6,349,410	B1		2/2002	Lortz
6,351,765	B1		2/2002	Pietropaolo et al.
6,359,615	B1		3/2002	Singh
6,363,395	B1		3/2002	Tanaka et al.
6,366,296	B1		4/2002	Boreczky et al.
6,369,835	B1		4/2002	Lin
6,393,430	B1		5/2002	Van et al.
6,411,283	B1		6/2002	Murphy
6,446,080	B1		9/2002	Van Ryzin et al.
6,452,609	B1		9/2002	Katinsky et al.
6,456,305	B1		9/2002	Qureshi et al.
6,466,198	B1		10/2002	Feinstein
6,466,203	B2		10/2002	Van Ee
6,486,895	B1		11/2002	Robertson et al.
6,486,896	B1		11/2002	Ubillos
6,489,975	B1		12/2002	Patil et al.
6,496,182	B1		12/2002	Wong et al.
6,538,665	B2		3/2003	Crow et al.
6,544,295	B1		4/2003	Bodnar et al.
6,570,583	B1		5/2003	Kung et al.
6,584,479	B2		6/2003	Chang et al.
6,587,127	B1		7/2003	Stojakovic et al.
6,590,568	B1		7/2003	Astala et al.
6,613,100	B2		9/2003	Miller
6,639,584	B1		10/2003	Li
6,683,628	B1		1/2004	Nakagawa et al.
6,714,221	B1		3/2004	Christie et al.
6,724,403	B1		4/2004	Santoro et al.
6,771,250	B1		8/2004	Oh
6,834,371	B1		12/2004	Jensen et al.
6,847,778	B1		1/2005	Mckendrick et al.
6,850,256	B2		2/2005	Crow et al.
6,928,461	B2		8/2005	Tuli
6,956,564	B1		10/2005	Williams
6,966,837	B1		11/2005	Best
7,030,861	B1		4/2006	Westerman et al.
7,054,965	B2		5/2006	Bell et al.
7,075,512	B1		7/2006	Fabre et al.
7,085,590	B2		8/2006	Kennedy et al.
7,111,240	B2		9/2006	Crow et al.
7,149,549	B1		12/2006	Ortiz et al.
7,152,210	B1		12/2006	Van Den Hoven et al.
7,166,791	B2		1/2007	Robbin et al.
7,171,625	B1		1/2007	Sacchi
7,315,984	B2		1/2008	Crow et al.
7,318,196	B2		1/2008	Crow et al.
7,346,855	B2		3/2008	Hellyar et al.
7,458,025	B2		11/2008	Crow et al.
7,461,353	B2		12/2008	Rohrabaugh et al.
7,479,949	B2		1/2009	Jobs et al.
7,480,870	B2		1/2009	Anzures et al.
7,509,588	B2		3/2009	Van Os et al.
7,552,388	B2		6/2009	Yoshimine
7,587,671	B2		9/2009	Saft et al.
7,596,761	B2		9/2009	Lemay et al.
7,676,767	B2		3/2010	Hofmeister et al.
7,730,401	B2		6/2010	Gillespie et al.
7,739,271	B2		6/2010	Cook et al.
7,788,583	B1		8/2010	Amzallag et al.
7,831,926	B2		11/2010	Rohrabaugh et al.
7,844,889	B2		11/2010	Rohrabaugh et al.
7,864,163	B2		1/2011	Ording et al.
7,956,847	B2		6/2011	Christie
7,956,849	B2		6/2011	Anzures et al.
8,196,043	B2		6/2012	Crow et al.
8,214,768	B2		7/2012	Boule et al.
8,531,423	B2		9/2013	Anzures et al.
8,547,355	B2		10/2013	Anzures et al.
8,669,950	B2		3/2014	Forstall et al.
8,686,962	B2		4/2014	Christie
8,842,074	B2		9/2014	Forstall et al.
8,912,988	B2		12/2014	Tomida et al.
9,927,970	B2		3/2018	Ording et al.
9,933,937	B2		4/2018	Lemay et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2001/0024195	A1	9/2001	Hayakawa	
2002/0015064	A1	2/2002	Robotham et al.	
2002/0033848	A1	3/2002	Sciammarella et al.	
2002/0036618	A1	3/2002	Wakai et al.	
2002/0093531	A1	7/2002	Barile	
2002/0152283	A1	10/2002	Dutta et al.	
2002/0163545	A1	11/2002	Hii	
2002/0191028	A1	12/2002	Senechalle et al.	
2002/0191029	A1	12/2002	Gillespie et al.	
2003/0013483	A1	1/2003	Ausems et al.	
2003/0022701	A1*	1/2003	Gupta	H04M 1/72481 455/566
2003/0025676	A1	2/2003	Cappendijk	
2003/0033331	A1	2/2003	Sena et al.	
2003/0063125	A1	4/2003	Miyajima et al.	
2003/0067908	A1	4/2003	Mattaway et al.	
2003/0076301	A1	4/2003	Tsuk et al.	
2003/0076303	A1	4/2003	Huppi	
2003/0081135	A1	5/2003	Boll	
2003/0095096	A1	5/2003	Robbin et al.	
2003/0095135	A1	5/2003	Kaasila et al.	
2003/0095155	A1	5/2003	Johnson	
2003/0117427	A1	6/2003	Haughawout et al.	
2003/0117440	A1	6/2003	Hellyar et al.	
2003/0122787	A1	7/2003	Zimmerman et al.	
2003/0135649	A1	7/2003	Buckley et al.	
2003/0164861	A1	9/2003	Barbanson et al.	
2003/0193524	A1	10/2003	Bates et al.	
2003/0204815	A1	10/2003	Edwards et al.	
2004/0003117	A1	1/2004	Mccoy et al.	
2004/0049541	A1	3/2004	Swahn et al.	
2004/0085351	A1	5/2004	Tokkonen	
2004/0100479	A1	5/2004	Nakano et al.	
2004/0103371	A1	5/2004	Chen et al.	
2004/0125081	A1	7/2004	Hayakawa	
2004/0143796	A1	7/2004	Lerner et al.	
2004/0167783	A1	8/2004	Nagai	
2004/0169674	A1	9/2004	Linjama	
2004/0201595	A1	10/2004	Manchester	
2004/0205496	A1	10/2004	Dutta et al.	
2004/0215719	A1	10/2004	Altshuler	
2004/0223004	A1	11/2004	Lincke et al.	
2004/0268393	A1	12/2004	Hunleth et al.	
2004/0268400	A1	12/2004	Barde et al.	
2005/0005246	A1	1/2005	Card et al.	
2005/0012723	A1	1/2005	Pallakoff	
2005/0020317	A1	1/2005	Koyama	
2005/0044509	A1	2/2005	Hunleth et al.	
2005/0057524	A1	3/2005	Hill et al.	
2005/0066286	A1	3/2005	Makela	
2005/0071364	A1	3/2005	Xie et al.	
2005/0071736	A1	3/2005	Schneider et al.	
2005/0071778	A1	3/2005	Tokkonen	
2005/0079896	A1	4/2005	Kokko et al.	
2005/0091107	A1	4/2005	Blum	
2005/0093826	A1	5/2005	Huh	
2005/0097444	A1	5/2005	Ivarsey et al.	
2005/0114788	A1	5/2005	Fabritius	
2005/0166232	A1	7/2005	Lamkin et al.	
2005/0177783	A1	8/2005	Agrawala et al.	
2005/0183017	A1	8/2005	Cain	
2005/0192924	A1	9/2005	Drucker et al.	
2005/0204385	A1	9/2005	Sull et al.	
2005/0229118	A1	10/2005	Chiu et al.	
2005/0283739	A1	12/2005	Mohr et al.	
2005/0283798	A1	12/2005	Hunleth et al.	
2005/0285880	A1	12/2005	Lai et al.	
2006/0001650	A1	1/2006	Robbins et al.	
2006/0001656	A1	1/2006	Laviola et al.	
2006/0017692	A1	1/2006	Wehrenberg et al.	
2006/0020993	A1*	1/2006	Hannum	H04N 21/6168 725/111
2006/0022955	A1	2/2006	Kennedy	
2006/0026521	A1	2/2006	Hotelling et al.	
2006/0026535	A1	2/2006	Hotelling et al.	
2006/0026536	A1	2/2006	Hotelling et al.	
2006/0033761	A1	2/2006	Suen et al.	
2006/0036944	A1	2/2006	Wilson	
2006/0048076	A1	3/2006	Vronay et al.	
2006/0051066	A1*	3/2006	Aridome	G11B 27/034 386/E9.017
2006/0053387	A1	3/2006	Ording	
2006/0064647	A1	3/2006	Tapuska et al.	
2006/0085743	A1	4/2006	Baudisch et al.	
2006/0097991	A1	5/2006	Hotelling et al.	
2006/0101354	A1	5/2006	Hashimoto et al.	
2006/0123360	A1	6/2006	Anwar et al.	
2006/0125799	A1	6/2006	Hillis et al.	
2006/0134959	A1*	6/2006	Ellenbogen	B60R 11/0211 439/297
2006/0143574	A1	6/2006	Ito et al.	
2006/0146016	A1	7/2006	Chan et al.	
2006/0146038	A1	7/2006	Park et al.	
2006/0164382	A1	7/2006	Kulas et al.	
2006/0176403	A1	8/2006	Gritton et al.	
2006/0197753	A1	9/2006	Hotelling	
2006/0262336	A1	11/2006	Venkatachalam et al.	
2006/0265643	A1	11/2006	Saft et al.	
2006/0267995	A1	11/2006	Radloff et al.	
2006/0271858	A1	11/2006	Yolleck et al.	
2006/0274046	A1	12/2006	Hillis et al.	
2006/0277588	A1	12/2006	Harrington et al.	
2006/0284852	A1	12/2006	Hofmeister et al.	
2007/0004451	A1	1/2007	C. Anderson	
2007/0011614	A1	1/2007	Crow et al.	
2007/0024646	A1	2/2007	Saarinen et al.	
2007/0038612	A1	2/2007	Sull et al.	
2007/0052689	A1	3/2007	Tak	
2007/0064619	A1	3/2007	Bettis et al.	
2007/0067738	A1	3/2007	Flynt et al.	
2007/0106952	A1	5/2007	Matas et al.	
2007/0152984	A1	7/2007	Ording et al.	
2007/0155434	A1	7/2007	Jobs et al.	
2007/0157228	A1	7/2007	Bayer et al.	
2007/0229465	A1	10/2007	Sakai et al.	
2007/0250768	A1	10/2007	Funakami et al.	
2007/0252821	A1	11/2007	Hollemans et al.	
2007/0263176	A1	11/2007	Nozaki et al.	
2008/0034029	A1	2/2008	Fang et al.	
2008/0042984	A1	2/2008	Lim et al.	
2008/0055272	A1	3/2008	Anzures et al.	
2008/0062137	A1	3/2008	Brodersen et al.	
2008/0122796	A1	5/2008	Jobs et al.	
2008/0165141	A1	7/2008	Christie	
2008/0165148	A1	7/2008	Williamson et al.	
2008/0165152	A1	7/2008	Forstall et al.	
2008/0165153	A1	7/2008	Platzer et al.	
2008/0174570	A1	7/2008	Jobs et al.	
2008/0231610	A1	9/2008	Hotelling et al.	
2009/0100383	A1	4/2009	Sunday et al.	
2011/0239155	A1	9/2011	Christie	
2014/0033035	A1	1/2014	Crow et al.	
2014/0059434	A1	2/2014	Anzures et al.	
2014/0092125	A1	4/2014	Max et al.	
2015/0046849	A1	2/2015	Forstall et al.	
2015/0082240	A1	3/2015	Herz et al.	
2017/0269794	A1	9/2017	Forstall et al.	
2018/0067643	A1	3/2018	Ording et al.	
2019/0155458	A1	5/2019	Forstall et al.	
2019/0196709	A1	6/2019	Ording et al.	

FOREIGN PATENT DOCUMENTS

CN	1553367	A	12/2004
CN	1577383	A	2/2005
CN	1613105	A	5/2005
CN	1658137	A	8/2005
CN	1752979	A	3/2006
EP	0459174	A2	12/1991
EP	0476972	A2	3/1992
EP	0564247	A1	10/1993
EP	0651544	A2	5/1995
EP	0701220	A1	3/1996
EP	0844555	A2	5/1998

(56) **References Cited**

FOREIGN PATENT DOCUMENTS

EP	0871177	A2	10/1998
EP	0880090	A2	11/1998
EP	0880091	A2	11/1998
EP	0881563	A2	12/1998
EP	0990202	A1	4/2000
EP	1049305	A1	11/2000
EP	1255186	A2	11/2002
EP	1517228	A2	3/2005
EP	1564632	A2	8/2005
EP	1632874	A2	3/2006
EP	1640878	A1	3/2006
EP	1752880	A1	2/2007
EP	1942401	A1	7/2008
FR	2830093	A3	3/2003
GB	2301217	A	11/1996
JP	6-95794	A	4/1994
JP	7-225829	A	8/1995
JP	8-44253	A	2/1996
JP	9-138745	A	5/1997
JP	10-96648	A	4/1998
JP	10-97543	A	4/1998
JP	10-198517	A	7/1998
JP	11-15817	A	1/1999
JP	11143604	A	5/1999
JP	11-242539	A	9/1999
JP	2000-56889	A	2/2000
JP	2000-115527	A	4/2000
JP	2000-163444	A	6/2000
JP	2000-181436	A	6/2000
JP	2000-242390	A	9/2000
JP	2001-14133	A	1/2001
JP	2001-142604	A	5/2001
JP	2001-175386	A	6/2001
JP	2001-265481	A	9/2001
JP	2001-516914	A	10/2001
JP	2002-7476	A	1/2002
JP	2002-34023	A	1/2002
JP	2002-244635	A	8/2002
JP	2002-259001	A	9/2002
JP	2002-323850	A	11/2002
JP	2003-30121	A	1/2003
JP	2003-512676	A	4/2003
JP	2003-191392	A	7/2003
JP	2003-195997	A	7/2003
JP	2003-252808	A	9/2003
JP	2003-263256	A	9/2003
JP	2004-132741	A	4/2004
JP	2004-518218	A	6/2004
JP	2004-199696	A	7/2004
JP	2004-206230	A	7/2004
JP	2004-227108	A	8/2004
JP	2004-288208	A	10/2004
JP	2004-318505	A	11/2004
JP	2005-18229	A	1/2005
JP	2005-18792	A	1/2005
JP	2005-109798	A	4/2005
JP	2005-110286	A	4/2005
JP	2005-151378	A	6/2005
JP	2005-202482	A	7/2005
JP	2005-234199	A	9/2005
JP	2005-234291	A	9/2005
JP	2005-242669	A	9/2005
JP	2005-267049	A	9/2005
JP	2005-277847	A	10/2005
JP	2005-303907	A	10/2005
JP	2006-18348	A	1/2006
JP	2006-18645	A	1/2006
JP	2006-120153	A	5/2006
JP	2006-139669	A	6/2006
JP	2008-508600	A	3/2008
JP	2008-518330	A	5/2008
JP	2013-222229	A	10/2013
JP	2014-71514	A	4/2014
KR	1998-032331	A	7/1998
KR	10-2004-0095410	A	11/2004
KR	10-2006-0031600	A	4/2006
KR	10-2006-0091321	A	8/2006
KR	10-2008-0084156	A	9/2008
WO	1997/20274	A1	6/1997
WO	1999/14655	A1	3/1999
WO	1999/54807	A1	10/1999
WO	2000/08757	A1	2/2000
WO	2002/46903	A1	6/2002
WO	2002/082418	A2	10/2002
WO	2002/093542	A1	11/2002
WO	2003/052626	A1	6/2003
WO	2004/021166	A1	3/2004
WO	2004/023450	A1	3/2004
WO	2004/040481	A1	5/2004
WO	2005/029308	A2	3/2005
WO	2005/029353	A1	3/2005
WO	2005/036416	A2	4/2005
WO	2005/041020	A1	5/2005
WO	2005/074268	A1	8/2005
WO	2005/106684	A1	11/2005
WO	2006/003591	A2	1/2006
WO	2006/020304	A2	2/2006
WO	2006/020305	A2	2/2006
WO	2006/042417	A1	4/2006
WO	2006/047697	A2	5/2006
WO	2007/089766	A2	8/2007
WO	2008/030874	A1	3/2008
WO	2008/030972	A1	3/2008
WO	2008/030976	A2	3/2008
WO	2008/083360	A1	7/2008
WO	2008/086303	A1	7/2008

OTHER PUBLICATIONS

Agarwal Amit, "iTunesInlineVideo", Digital Inspiration—The Tech Guide, Available online at: http://labnol.blogspot.com/2006_09_17_labnol_archive.html, 2006, 27 pages.

Ahmad et al., "Content-Based Image Retrieval on Mobile Devices", Proceedings of SPIE-IS&T Electronic Imaging, vol. 5684, 2005, pp. 255-264.

Alam et al., "Web Document Manipulation for Small Screen Devices: A Review", BCL Technologies Inc., Proceedings of the 2nd International Workshop on Web Document Analysis, 2003, pp. 33-36.

Alejandre Suzanne, "Graphing Linear Equations", Available online at: http://mathforum.org/alejandre/palm/times.palm.html, retrieved on Jun. 12, 2006, 3 pages.

Apparao et al., "Level 1 Document Object Model Specification Version 1.0", W3C Working Draft, Available online at: http://www.w3.org/TR/WD-DOM/, Jul. 20, 1998, 3 pages.

Apple Inc. vs. *Samsung Electronics Co. Ltd et al.*, Judgment in Interlocutory proceeding, Case No. 396957/KG ZA 11-730, civil law sector, Aug. 24, 2011, pp. 1-65.

Apple Inc. vs. *Samsung Electronics Co. Ltd et al.*, Samsung's Motion to Supplement Invalidity Contentions, Case No. 11-cv-01846-LHK, filed Jan. 27, 2012 together with Exhibit 6, Jan. 27, 2012, 47 pages.

Apple Inc. vs. *Samsung Electronics Co. Ltd et al.*, Samsung's Patent Local Rule 3-3 and 3-4 Disclosures, Case No. 11-cv-01846-LHK, dated Oct. 7, 2011, together with Exhibits G-1 through G-7 and Exhibit H, Oct. 7, 2011, 287 pages.

Applicant-Initiated Interview Summary received for U.S. Appl. No. 14/043,788, dated Dec. 1, 2020, 5 pages.

Applicant-Initiated Interview Summary received for U.S. Appl. No. 16/288,632, dated Mar. 23, 2020, 5 pages.

Arons Barrym., "The Audio-Graphical Interface to a Personal Integrated Telecommunications System", Thesis Submitted to the Department of Architecture at the Massachusetts Institute of Technology, Jun. 1984, 88 pages.

Baudisch et al., "Collapse-to-Zoom: Viewing Web Pages on Small Screen Devices by Interactively Removing Irrelevant Content", Microsoft Research, Available online at: http://www.patrickbaudisch.com/publications/2004-Baudisch-UIST04-CollapseToZoom.pdf, Oct. 27, 2004, 4 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Baudisch et al., "Halo: A Technique for Visualizing Off-Screen Locations", CHI 2003: New Horizons vol. No. 5, Apr. 5-10, 2003, pp. 481-488.
Bederson et al., "Pad++: A Zooming Graphical Interface for Exploring Alternate Interface Physics", UIST' 94 ACM, Nov. 2, 1994, pp. 17-26.
BITSTREAM®, "ThunderHawk Pocket PC Edition for End Users", Available online at: http://www.bitstream.com/wireless/products/pocketpc/faq_using.html, retrieved on Jun. 12, 2006, 4 pages.
Björk et al., "WEST: A Web Browser for Small Terminals", Proceedings of the 12th Annual ACM Symposium on User Interface Software and Technology, Nov. 7-10, 1999, 9 pages.
Bos et al., "3 Conformance: Requirements and Recommendations", Cascading Style Sheets, level 2 CSS2 Specification, W3C Recommendation, Available online at: http://www.w3.org/TR/CSS21/conform.html#doctree, May 12, 1998, 6 pages.
Brief Communication Regarding Oral Proceedings received for European Patent Application No. 17171177.3, mailed on Nov. 16, 2020, 2 pages.
Buyukkokten et al., "Power Browser: Efficient Web Browsing for PDAs", Proceedings of the SIGCHI conference on Human Factors in Computing Systems, 2000, 8 pages.
Certificate of Examination received for Australian Patent Application No. 2011101190, dated Nov. 23, 2011, 1 page.
Chen et al., "A Novel Navigation and Transmission Technique for Mobile Handheld Devices", Technical Report CSE-2003-1, Department of Computer Science, University of California at Davis, 2003, 8 pages.
Chen et al., "Detecting Web Pages Structure for Adaptive Viewing on Small Form Factor Devices", Proceedings of the 12th international conference on World Wide Web, 2003, 9 pages.
Chen et al., "DRESS: A Slicing Tree Based Web Representation for Various Display Sizes", Microsoft Research, Technical Report, Nov. 16, 2002, 9 pages.
CNET, "Fujitsu LifeBook B6110D", Reviews, Nov. 24, 2005, 2 pages.
CNET, "Video: Create Custom Widgets with Web Clip", CNET News, Available online at: http://news.cnet.com/1606-2-6103525.html, Aug. 8, 2006, 3 pages.
Coleman Davidw, "Meridian Mail Voice Mail System Integrates Voice Processing and Personal Computing", Speech Technology, vol. 4, No. 2, Mar./Apr. 1988, pp. 84-87.
Cooper Alan, "The Inmates Are Running the Asylum", Sams Publishing, Mar. 23, 1999, pp. 138-147.
Corrected Notice of Allowance received for U.S. Appl. No. 15/619,027, dated Nov. 6, 2018, 2 pages.
Decision on Appeal received for Korean Patent Application No. 10-2016-7023037, mailed on Jun. 17, 2019, 21 pages.
Decision to Grant received for Chinese Patent Application No. 200780001140.9, dated Feb. 3, 2012, 4 pages.
Decision to Grant received for European Patent Application No. 07814690.9, dated Nov. 10, 2016, 3 pages.
Decision to Grant received for European Patent Application No. 07841980.1, dated Aug. 1, 2013, 3 pages.
Decision to Grant received for European Patent Application No. 12174677.0, dated Sep. 29, 2016, 3 pages.
Decision to Refusal received for European Patent Application No. 07869929.5, dated Jun. 4, 2012, 8 pages.
Decision to Refusal received for European Patent Application No. 09171787.6, dated Dec. 14, 2011, 22 pages.
Decision to Refusal received from European Patent Application No. 07814690.9, dated Jun. 11, 2012, 13 pages.
Decision to Refuse received for European Patent Application No. 12169786.6, dated Feb. 26, 2015, 16 pages.
Decision to refuse received for European Patent Application No. 12169786.6, dated Mar. 7, 2019, 12 pages.
Examiner's Answer to Appeal Brief received for U.S. Appl. No. 14/043,788, mailed on Jun. 25, 2018, 25 pages.
Extended European Search Report (includes Partial European Search Report and European Search Opinion) received for European Patent Application No. 09171787.6, dated Jan. 26, 2010, 6 pages.
Extended European Search Report (includes Partial European Search Report and European Search Opinion) received for European Patent Application No. 12169786.6, dated Jul. 11, 2012, 10 pages.
Extended European Search Report received for European Patent Application No. 12174677.0, dated Aug. 10, 2012, 11 pages.
Extended European Search Report received for European Patent Application No. 17171177.3, dated Feb. 6, 2018, 16 pages.
Eyemodule Springboard Compatible, "Turn Your Handspring™ Visor™ Handheld into a Digital Camera", User's Manual, 2000, 9 pages.
Final Office Action received for U.S. Appl. No. 11/620,647, dated Dec. 23, 2010, 21 pages.
Final Office Action received for U.S. Appl. No. 11/850,008, dated Dec. 29, 2010, 14 pages.
Final Office Action received for U.S. Appl. No. 11/850,638, dated Feb. 8, 2011, 14 pages.
Final Office Action received for U.S. Appl. No. 11/850,638, dated Feb. 4, 2014, 23 pages.
Final Office Action received for U.S. Appl. No. 11/850,638, dated May 15, 2012, 16 pages.
Final Office Action received for U.S. Appl. No. 11/961,773, dated May 1, 2019, 17 pages.
Final Office Action received for U.S. Appl. No. 11/961,773, dated Nov. 2, 2011, 12 pages.
Final Office Action received for U.S. Appl. No. 11/961,773, dated Nov. 29, 2012, 15 pages.
Final Office Action received for U.S. Appl. No. 11/968,067, dated May 13, 2011, 16 pages.
Final Office Action received for U.S. Appl. No. 12/042,299, dated Jul. 8, 2011, 8 pages.
Final Office Action received for U.S. Appl. No. 13/155,304 dated Feb. 7, 2013, 12 pages.
Final Office Action received for U.S. Appl. No. 14/043,788, dated Mar. 9, 2017, 14 pages.
Final Office Action received for U.S. Appl. No. 14/493,128, dated Dec. 21, 2016, 17 pages.
Final Office Action received for U.S. Appl. No. 16/288,632, dated Apr. 7, 2020, 6 pages.
Fingerworks Forums, "Is the Multitouch Lemur?", Available online at: http://64233.167.104/search?q=cache:sjVdtyFBvRMJ:forums.finger, retrieved on Nov. 16, 2005, 2 pages.
Fingerworks, Inc., "Installation and Operation Guide for iGesture Products w/Keys", Available online at: www.fingerworks.com, © 2002, 10 pages.
Fingerworks, Inc., "Installation and Operation Guide for the TouchStream and TouchStream LP", Available online at: http://www.fingerworks.com, 2002, pp. 1-25.
Fingerworks, Inc., "Quick Reference Guide for iGesture Products", Available online at: http://www.fingerworks.com, 1999-2002, 2 pages.
Fingerworks, Inc., "Quick Reference Guide for TouchStream ST/LP", Available online at: http://www.fingerworks.com, 2001-2003, 4 pages.
Fingerworks, Inc., "TouchStream LP Silver", Available online at: http://www.fingerworks.com, Apr. 27, 2005, 18 pages.
Fling Brian, "Designing for Mobile, Bringing Design Down to Size", Blue Flavor, Jul. 2006, 103 pages.
Gears Leigh, "Orange SPV C600 Review", Available online at: http://www.coolsmartphone.com/article569.html, retrieved on Apr. 14, 2006, 57 pages.
Getgreg, "Jeff Han's Multiple Touch Point Display, the Stuff Dreams are Made of", Available online at: http://www.theyshoulddothat.com/2006/08/jeff_hanns_multiple_touch_poin.html, retrieved on Aug. 16, 2006, 2 pages.
Grant of Patent received for Taiwan Patent Application No. 097100075, dated Apr. 11, 2013, 3 pages.
Guan et al., "Zoom Selector: A Pen-based Interaction Technique for Small Target Selection", Transactions of the Information Processing Society of Japan, vol. 45, No. 8, Aug. 2004, pp. 2087-2097.

(56) **References Cited**

OTHER PUBLICATIONS

Han Jeff, "Talks Jeff Han: Unveiling the Genius of Multi-touch Interface Design", Ted Ideas Worth Spreading, Available online at: http://www.ted.com/index.php/talks/view/id/65, retrieved on Aug. 2006, 2 pages.
Hart Kim, "Rewriting the Web for Mobile Phones", washingtonpost.com, Available online at: http://www.washingtonpost.com/wp-dyn/content/article/2006/07/25/AR2006072501517_pf.html, Jul. 26, 2006, 2 pages.
Hinckley et al., "Input/Output Devices and Interaction Techniques", CRC Press, Nov. 2004, pp. 1-79.
Holmquist Larse., "The Zoom Browser Showing Simultaneous Detail and Overview in Large Documents", Human IT, Available online at: http://www.hb.se/bhs/ith/3-98/leh.htm, 1998, 12 pages.
HTC Europe Co. Ltd. and Apple Inc. invalidity Claim dated Jul. 29, 2011, together with amended Particulars of Claim and amended Grounds of invalidity, Jul. 29, 2011, 22 pages.
HTC Europe Co. Ltd. and Apple Inc. Invalidity Claim No. HC 12 C 01465, together with annexes, dated Apr. 5, 2012, 12 pages.
Intention to Grant received for European Patent Application No. 07814690.9, dated Jun. 28, 2016, 7 pages.
Intention to Grant received for European Patent Application No. 07841980.1, dated Mar. 11, 2013, 10 pages.
Intention to Grant received for European Patent Application No. 12174677.0, dated May 6, 2016, 8 pages.
International Preliminary Report on Patentability received for PCT Patent Application No. PCT/US2007/088879, dated Jul. 7, 2009, 7 pages.
International Preliminary Report on Patentability received for PCT Patent Application No. PCT/US2007/077638, dated Mar. 10, 2009, 7 pages.
International Preliminary Report on Patentability received for PCT Patent Application No. PCT/US2007/077644, dated Mar. 10, 2009, 11 pages.
International Preliminary Report on Patentability received for PCT Patent Application No. PCT/US2007/077773, dated Mar. 10, 2009, 6 pages.
International Preliminary Report on Patentability received for PCT Patent Application No. PCT/US2007/088893, dated Jul. 7, 2009, 8 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2007/077638, dated Feb. 19, 2008, 9 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2007/077644, dated May 30, 2008, 18 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2007/077773, dated Jan. 15, 2008, 8 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2007/088879, dated Jun. 30, 2008, 8 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2007/088893, dated Jul. 11, 2008, 10 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2008/050430, dated Sep. 1, 2008, 13 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2010/062307, dated Apr. 5, 2011, 13 pages.
Invitation to pay additional fees received for PCT Patent Application No. PCT/US2007/077644, dated Jan. 23, 2008, 10 pages.
Invitation to Pay Additional Fees received for PCT Patent Application No. PCT/US2008/050430, dated Jun. 27, 2008, 7 pages.
Irani et al., "Improving Selection of Off-Screen Targets with Hopping", CHI 2006 Proceedings, Multidisplay Environments, Apr. 22-27, 2006, pp. 299-308.
Kamimori Tsutomu, "Make the website more stylish! CSS Design Right Now Started", Web Creators, vol. 51, Mdn Corporation, Mar. 1, 2006, pp. 136-139.
Karlson et al., "AppLens and LaunchTile: Two Designs for One-Handed Thumb Use on Small Devices", CHI 2005, Papers: Small Devices 1, Apr. 2-7, 2005, pp. 201-210.
Karlson et al., "AppLens and LaunchTile: Two Designs for One-Handed Thumb Use on Small Devices", PowerPoint Presentation, CHI 2005, pp. 1-17.
Khella et al., "Pocket PhotoMesa: A Zoomable Image Browser for PDAs", Proceedings of the 3rd International Conference on Mobile and Ubiquitous Multimedia, Available online at: http://delivery.acm.org/10.1145/1060000/1052384/p19-khella.pdf?key1=1052384&key2=2419987911&co11=GUIDE&d1=GUIDE&CFID=47073625&CFTOKEN=65767142, Oct. 29, 2004, 2 pages.
Kinoma, "Kinoma Player 4 EX Documentation", Available online at: http://replay.waybackmachine.org/20061101175306/http://www.kinoma.com/index/pd-player-4, retrieved on Nov. 1, 2006, 28 pages.
Laakko et al., "Adapting Web Content to Mobile User Agents", IEEE Internet Computing, vol. 9, No. 2, Mar./Apr. 2005, pp. 46-53.
Landragin Frédéric, "The Role of Gesture in Multimodal Referring Actions", Proceedings of the 4th IEEE International Conference on Multimodal Interfaces, Available online at: http://ieeexplore.iee.org/ie15/8346/26309/01166988pdf?arnumber=1166988, 2002, 6 pages.
Lie Håkonw., "Cascading Style Sheets (chpt 8 CSS for small screens)", Available online at: http://people.opera.com/howcome/2006/phd/css.pdf University of Osloensis, MDCCCXI, pp. 243-247, retrieved on 2005, 8 pages.
Malak Michael, "Adding Video to Your Web pages", Web Mechanics, Computing in Science and Engineering, May/Jun. 2000, pp. 74-77.
Marsh et al., "Using Cinematography Conventions to Inform Guidelines for the Design and Evaluation of Virtual Off-Screen Space", Available online at: https://pdfs.semanticscholar.org/763d/e2a737c7abc0adbfccb215e07607bc944535.pdf Retrieved on Jul. 7, 2017, AAAI Technical Report SS-00-04, Jan. 1, 2000, 5 pages.
Microsoft Corporation, "Microsoft Office Word 2003 (SP2)", Microsoft Corporation, SP3 as of 2005, pages MSWord 2003 Figures 1-5, 1983-2003, 5 pages.
Microsoft Word 2000 Microsoft Corporation, pages MSWord Figures 1-5, 2000, 5 pages.
Microsoft Word, "Example of Scrolling Pages in Word 2003", 2003, 3 pages.
Milic-Frayling et al., "SmartView: Enhanced Document Viewer for Mobile Devices", Microsoft Technical Report, Available online at: ftp://ftp.research.microsoft.com/pub/tr/tr-2002-114.pdf, retrieved on Nov. 15, 2002, 10 pages.
Milic-Frayling et al., "SmartView: Flexible Viewing of Web Page Contents", Proceedings of the Eleventh International World Wide Web Conference, Available online at: http://www2002.org/CDROM/poster/172/, retrieved on May 11, 2002, 4 pages.
Minutes of Meetings received for European Patent Application No. 12169786.6, dated Mar. 5, 2019, 7 pages.
Motorola Mobility Opposition Grounds to Apple Inc. European Patent EP 2126678 dated Apr. 11, 2012, together with Exhibits E3, E4, and E5 re: CHT 2005, Apr. 2-7, 2005, Portland Oregon, USA, Apr. 2012, 53 pages.
Multimedia Video Formats, Available online at: http://www.w3sschools.com/media/media_videoformats.asp?output=print, 2006, 2 pages.
Myers Brada., "Shortcutter for Palm", Available online at: http://www.cs.cmu.edu/~pebbles/v5/shortcutter/palm/index.html, retrieved on Jun. 18, 2014, 10 pages.
Non-Final Office Action received for U.S. Appl. No. 14/043,788, dated Jul. 14, 2016, 13 pages.
Non-Final Office Action received for U.S. Appl. No. 14/493,128, dated Sep. 12, 2016, 18 pages.
Non-Final Office Action received for U.S. Appl. No. 14/205,268, dated Feb. 18, 2016, 17 pages.
Non-Final Office Action received for U.S. Appl. No. 11/620,647 dated Jun. 24, 2010, 19 pages.
Non-Final Office Action received for U.S. Appl. No. 11/620,647 dated Nov. 17, 2009, 20 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Non-Final Office Action received for U.S. Appl. No. 11/620,647, dated Oct. 13, 2011, 23 pages.
Non-Final Office Action received for U.S. Appl. No. 11/850,008, dated Aug. 2, 2010, 14 pages.
Non-Final Office Action received for U.S. Appl. No. 11/850,013, dated Jun. 11, 2010, 32 pages.
Non-Final Office Action received for U.S. Appl. No. 11/850,638, dated Jan. 17, 2012, 15 pages.
Non-Final Office Action received for U.S. Appl. No. 11/850,638, dated Jun. 27, 2013, 16 pages.
Non-Final Office Action received for U.S. Appl. No. 11/850,638, dated Oct. 26, 2010, 17 pages.
Non-Final Office Action received for U.S. Appl. No. 11/961,773, dated Apr. 2, 2018, 13 pages.
Non-Final Office Action received for U.S. Appl. No. 11/961,773, dated Apr. 15, 2011, 21 pages.
Non-Final Office Action received for U.S. Appl. No. 11/961,773, dated May 10, 2012, 14 pages.
Non-Final Office Action received for U.S. Appl. No. 11/961,773, dated Sep. 24, 2019, 16 pages.
Non-Final Office Action received for U.S. Appl. No. 11/968,067, dated Oct. 15, 2010, 13 pages.
Non-Final Office Action received for U.S. Appl. No. 12/042,299, dated Jan. 4, 2011, 9 pages.
Non-Final Office Action received for U.S. Appl. No. 12/981,433, dated Oct. 11, 2012, 29 pages.
Non-Final Office Action received for U.S. Appl. No. 13/155,304, dated Sep. 5, 2012, 11 pages.
Non-Final Office Action received for U.S. Appl. No. 13/464,454, dated Jul. 9, 2012, 13 pages.
Non-Final Office Action received for U.S. Appl. No. 14/043,788, dated Dec. 17, 2015, 13 pages.
Non-Final Office Action received for U.S. Appl. No. 14/043,788, dated Jun. 29, 2020, 36 pages.
Non-Final Office Action received for U.S. Appl. No. 14/205,268, dated Sep. 26, 2016, 18 pages.
Non-Final Office Action received for U.S. Appl. No. 15/619,027, dated May 4, 2018, 15 pages.
Non-Final Office Action received for U.S. Appl. No. 15/807,283, dated Apr. 25, 2018, 12 pages.
Non-Final Office Action Received for U.S. Appl. No. 16/260,905, dated Jul. 17, 2019, 17 pages.
Non-Final Office Action received for U.S. Appl. No. 16/288,632, dated Nov. 21, 2019, 10 pages.
Northern Telecom, "Meridian Mail PC User Guide", 1988, 17 pages.
Notice of Acceptance received for Australian Patent Application No. 2007292383, dated Jan. 4, 2012, 3 pages.
Notice of Acceptance received for Australian Patent Application No. 2011265564, dated Aug. 4, 2014, 2 pages.
Notice of Acceptance received for Australian Patent Application No. 2014262258, dated Apr. 1, 2016, 2 pages.
Notice of Acceptance received for Australian Patent Application No. 2016204921, dated Jul. 10, 2017, 4 pages.
Notice of Acceptance received for Australian Patent Application No. 2017245373, dated May 1, 2019, 3 pages.
Notice of Acceptance received for Australian Patent Application No. 2019213409, dated Sep. 9, 2020, 3 pages.
Notice of Allowance received for Canadian Patent Application No. 2,662,134, dated Dec. 10, 2014, 1 page.
Notice of Allowance received for Canadian Patent Application No. 2,894,056, dated Jun. 4, 2018, 1 page.
Notice of Allowance received for Canadian Patent Application No. 2,986,163 dated Sep. 11, 2019, 1 page.
Notice of Allowance received for Canadian Patent Application No. 3,075,071, dated Aug. 6, 2020, 1 page.
Notice of allowance received for Chinese Patent Application No. 200780041222.6, dated Feb. 4, 2013, 2 pages.
Notice of Allowance received for Chinese Patent Application No. 200780052019.9, dated Mar. 19, 2014, 4 pages.
Notice of Allowance received for Chinese Patent Application No. 201210114287.1, dated Mar. 27, 2015, 4 pages.
Notice of Allowance received for Chinese Patent Application No. 201310136453.2, dated Jun. 26, 2017, 4 pages.
Notice of Allowance received for Chinese Patent Application No. 201310136787.X, dated Aug. 19, 2016, 4 pages.
Notice of Allowance received for Japanese Patent Application No. 2009-527566, dated Oct. 4, 2013, 3 pages.
Notice of Allowance received for Japanese Patent Application No. 2013-080820, dated Aug. 11, 2014, 3 pages.
Notice of Allowance received for Japanese Patent Application No. 2013-229756, dated Oct. 24, 2014, 3 pages.
Notice of Allowance received for Japanese Patent Application No. 2014-184473, dated Oct. 3, 2016, 3 pages.
Notice of Allowance received for Japanese Patent Application No. 2014-238083, dated Mar. 12, 2019, 3 pages.
Notice of Allowance received for Japanese Patent Application No. 2016-175843, dated Aug. 24, 2018, 4 pages.
Notice of Allowance received for Japanese Patent Application No. 2018-178038, dated Sep. 30, 2019, 4 pages.
Notice of Allowance received for Japanese Patent Application No. 2019-196279, dated Dec. 4, 2020, 4 pages.
Notice of Allowance received for Korean Patent Application No. 10-2009-7007064, dated Sep. 30, 2011, 2 pages.
Notice of Allowance received for Korean Patent Application No. 10-2009-7007067, dated Dec. 1, 2011, 2 pages.
Notice of Allowance received for Korean Patent Application No. 10-2011-7019633, dated May 18, 2012, 2 pages.
Notice of Allowance received for Korean Patent Application No. 10-2011-7026453, dated Apr. 10, 2015, 3 pages.
Notice of Allowance received for Korean Patent Application No. 10-2013-7028362, dated Aug. 24, 2015, 5 pages.
Notice of Allowance received for Korean Patent Application No. 10-2014-7023012, dated May 24, 2016, 5 pages.
Notice of Allowance received for Korean Patent Application No. 10-2017-7037416, dated Nov. 8, 2019, 5 pages.
Notice of Allowance received for U.S. Appl. No. 13/464,454, dated May 1, 2013, 6 pages.
Notice of Allowance received for U.S. Appl. No. 13/464,454, dated Oct. 29, 2012, 5 pages.
Notice of Allowance received for U.S. Appl. No. 11/620,647 dated Mar. 2, 2012, 8 pages.
Notice of Allowance received for U.S. Appl. No. 11/850,008, dated Mar. 11, 2011, 7 pages.
Notice of Allowance received for U.S. Appl. No. 11/850,013, dated Oct. 20, 2010, 20 pages.
Notice of Allowance received for U.S. Appl. No. 11/850,638, dated May 13, 2014, 5 pages.
Notice of Allowance received for U.S. Appl. No. 12/981,433, dated Feb. 3, 2014, 5 pages.
Notice of Allowance received for U.S. Appl. No. 12/981,433, dated Feb. 19, 2013, 5 pages.
Notice of Allowance received for U.S. Appl. No. 12/981,433, dated Sep. 27, 2013, 6 pages.
Notice of Allowance received for U.S. Appl. No. 13/155,304, dated Jul. 25, 2013, 10 pages.
Notice of Allowance received for U.S. Appl. No. 14/043,788, dated Feb. 4, 2021, 5 pages.
Notice of Allowance received for U.S. Appl. No. 14/205,268, dated Feb. 13, 2017, 8 pages.
Notice of Allowance received for U.S. Appl. No. 14/205,268, dated May 31, 2017, 5 pages.
Notice of Allowance received for U.S. Appl. No. 14/493,128, dated Jun. 8, 2017, 7 pages.
Notice of Allowance received for U.S. Appl. No. 14/493,128, dated Nov. 8, 2017, 7 pages.
Notice of Allowance received for U.S. Appl. No. 15/619,027, dated Oct. 24, 2018, 10 pages.
Notice of Allowance received for U.S. Appl. No. 15/807,283, dated Oct. 31, 2018, 10 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Notice of Allowance received for U.S. Appl. No. 16/260,905, dated Jan. 17, 2020, 8 pages.
Notice of Allowance received for U.S. Appl. No. 16/288,632, dated Jul. 20, 2020, 5 pages.
Notice of Appeal in Expedited Appeal in Summary Proceedings dated Sep. 14, 2011, pp. 1-51.
Office Action received in Korean Patent Application No. 10-2017-7037416, dated Feb. 20, 2018, 5 pages.
Office Action received for Australian Patent Application No. 2007289019, dated Jul. 2, 2009, 3 pages.
Office Action received for Australian Patent Application No. 2007289019, dated Oct. 7, 2009, 2 pages.
Office Action received for Australian Patent Application No. 2007292383, dated Dec. 22, 2011, 2 pages.
Office Action received for Australian Patent Application No. 2007292383, dated Mar. 24, 2010, 2 pages.
Office Action received for Australian Patent Application No. 2007292383, dated May 12, 2011, 2 pages.
Office Action received for Australian Patent Application No. 2009100760, dated Sep. 28, 2009, 2 pages.
Office Action received for Australian Patent Application No. 2011265564, dated Jun. 14, 2013, 4 pages.
Office Action received for Australian Patent Application No. 2014262258, dated Jul. 13, 2015, 4 pages.
Office Action received for Australian Patent Application No. 2016204921, dated Mar. 24, 2017, 3 pages.
Office Action received for Australian Patent Application No. 2017245373, dated Aug. 29, 2018, 3 pages.
Office Action received for Australian Patent Application No. 2019213409, dated Jun. 19, 2020, 4 pages.
Office Action received for Canadian Patent Application No. 2,894,056, dated Jul. 4, 2016, 3 pages.
Office Action received for Canadian Patent Application No. 2,894,056, dated May 24, 2017, 3 pages.
Office Action received for Canadian Patent Application No. 2,986,163 dated Sep. 20, 2018, 5 pages.
Office Action received for Chinese Patent Application No. 200780001140.9, dated Jan. 15, 2010, 5 pages.
Office Action received for Chinese Patent Application No. 200780001140.9, dated Jun. 10, 2011, 7 pages.
Office Action received for Chinese Patent Application No. 200780041222.6, dated Feb. 29, 2012, 6 pages.
Office Action received for Chinese Patent Application No. 200780041222.6, dated Jul. 25, 2012, 3 pages.
Office Action received for Chinese Patent Application No. 200780041222.6, dated Oct. 13, 2010, 10 pages.
Office Action received for Chinese Patent Application No. 200780052019, dated Jan. 22, 2013, 15 pages.
Office Action received for Chinese Patent Application No. 200780052019.9, dated Feb. 29, 2012, 6 pages.
Office Action received for Chinese Patent Application No. 200780052019.9, dated Jul. 30, 2013, 8 pages.
Office Action received for Chinese Patent Application No. 200910175852.3, dated Apr. 24, 2012, 10 pages.
Office Action received for Chinese Patent Application No. 200910175852.3, dated Jun. 3, 2014, 4 pages.
Office Action received for Chinese Patent Application No. 200910175852.3, dated Jun. 2, 2011, 6 pages.
Office Action received for Chinese Patent Application No. 201210114287.1, dated Jan. 8, 2014, 13 pages.
Office Action received for Chinese Patent Application No. 201210114287.1, dated Sep. 12, 2014, 9 pages.
Office Action received for Chinese Patent Application No. 201310136453.2, dated Apr. 21, 2015, 12 pages.
Office Action received for Chinese Patent Application No. 201310136453.2, dated Feb. 14, 2016, 28 pages.
Office Action received for Chinese Patent Application No. 201310136453.2, dated Nov. 8, 2016, 11 pages.
Office Action received for Chinese Patent Application No. 201310136787.X, dated Jan. 13, 2016, 28 pages.
Office Action received for Chinese Patent Application No. 201310136787.X, dated Jun. 1, 2015, 19 pages.
Office Action received for European Patent Application No. 07814690.9, dated Jun. 21, 2010, 5 pages.
Office Action received for European Patent Application No. 07814690.9, dated Oct. 19, 2010, 8 pages.
Office Action received for European Patent Application No. 07841980.1, dated Feb. 23, 2012, 5 pages.
Office Action received for European Patent Application No. 07869929.5, dated Dec. 27, 2010, 6 pages.
Office Action received for European Patent Application No. 09171787.6, dated Jan. 11, 2011, 1 page.
Office Action received for European Patent Application No. 09171787.6, dated Jul. 12, 2011, 5 pages.
Office Action received for European Patent Application No. 09700007.9, dated Nov. 26, 2010, 5 pages.
Office Action received for European Patent Application No. 12169786.6 dated Jul. 17, 2017, 8 pages.
Office Action received for European Patent Application No. 12169786.6, dated Aug. 28, 2013, 5 pages.
Office Action received for European Patent Application No. 12174677.0, dated Aug. 28, 2013, 3 pages.
Office Action received for European Patent Application No. 17171177.3, dated Sep. 18, 2019, 5 pages.
Office Action received for German Patent Application No. 112007002107.1, dated Jun. 7, 2010, 3 pages.
Office Action received for German Patent Application No. 112009000003.7, dated Aug. 10, 2010, 3 pages.
Office Action received for Japanese Patent Application No. 2009-527541, dated Dec. 7, 2012, 10 pages.
Office Action received for Japanese Patent Application No. 2009-527541, dated May 21, 2012, 3 pages.
Office Action received for Japanese Patent Application No. 2009-527541, dated Sep. 26, 2011, 3 pages.
Office Action received for Japanese Patent Application No. 2009-527566, dated Aug. 15, 2011, 3 pages.
Office Action received for Japanese Patent Application No. 2009-527566, dated Sep. 21, 2012, 3 pages.
Office Action received for Japanese Patent Application No. 2013-080820, dated Feb. 7, 2014, 7 pages.
Office Action received for Japanese Patent Application No. 2014-184473, dated May 9, 2016, 6 pages.
Office Action received for Japanese Patent Application No. 2014-184473, dated Oct. 5, 2015, 6 pages.
Office Action received for Japanese Patent Application No. 2014-238083, dated Feb. 24, 2017, 5 pages.
Office Action received for Japanese Patent Application No. 2014-238083, dated Feb. 26, 2016, 5 pages.
Office Action received for Japanese Patent Application No. 2014-238083, dated Jul. 20, 2018, 50 pages.
Office Action received for Japanese Patent Application No. 2014-238083, dated Sep. 5, 2017, 6 pages.
Office Action received for Japanese Patent Application No. 2016175843, dated Jul. 7, 2017, 8 pages.
Office Action received for Japanese Patent Application No. 2016-175843, dated May 11, 2018, 9 pages.
Office Action received for Korean Patent Application No. 10-2009-7007067, dated Aug. 30, 2011, 2 pages.
Office Action received for Korean Patent Application No. 10-2009-7007067, dated Nov. 12, 2010, 3 pages.
Office Action received for Korean Patent Application No. 10-2011-7026453, dated Apr. 26, 2013, 3 pages.
Office Action received for Korean Patent Application No. 10-2011-7026453, dated Feb. 17, 2014, 9 pages.
Office Action received for Korean Patent Application No. 10-2013-7028362, dated Dec. 16, 2014, 5 pages.
Office Action received for Korean Patent Application No. 10-2013-7028362, dated Feb. 17, 2014, 4 pages.
Office Action received for Korean Patent Application No. 10-2014-7023012, dated Dec. 1, 2014, 3 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Office Action received for Korean Patent Application No. 10-2014-7023012, dated Jun. 30, 2015, 6 pages.
Office Action received for Korean Patent Application No. 10-2016-7023037, dated Aug. 28, 2017, 7 pages.
Office Action received for Korean Patent Application No. 1020167023037, dated Oct. 18, 2016, 13 pages.
Office Action received for Taiwan Patent Application No. 097100075, dated Dec. 29, 2011, 5 pages.
Oliver Dick, "Adding Multimedia to Your Web Site", Chapter 22, Web Publishing Professional Reference Edition, Available online at: http://www.ssuet.edu.pk/taimoor/books/1-57521-198-X/index.htm, 1997, 14 pages.
Opera Software, "Download the Opera Mobile™ Browser", Available online at: http://www.opera.com/products/mobile/products/, retrieved on Oct. 19, 2006, 5 pages.
Opera Software, "Opera 7.60 for Series 60 Mobile", Available online at: http://jp.opera.com/support/tutorials/s60/760/O760manual.pdf, 2009, 14 pages.
Opera Software, "Opera 8.5 Beta 2 for Windows Mobile, Pocket PC", Available online at: http://www.opera.com/products/mobile/products/winmobileppc, retrieved on Apr. 5, 2006, 2 pages.
Opera Software, "Opera 8.5 for S60 Phones—Get the Full Internet Experience on Your Mobile Phone", Available online at: http://www.symbian-freak.com/news/1105/opera.htm, Oct. 14, 2005, 3 pages.
Opera Software, "Opera for Mobile, The Full Web Anytime, Anywhere", Available online at: www.opera.com/mobile, Jan. 2006, 7 pages.
Opera Software, "Opera for S60 Tutorial", Available online at: http://www.xmarks.com/site/www.opera.com/support/tutorials/s60/, retrieved on Apr. 5, 2006, 5 pages.
Opera Software, "Opera for Windows Mobile Smartphone 2003 Tutorial", Available online at: http://www.opera.com/support/tutorials/winmobile, retrieved on Apr. 5, 2005, 4 pages.
Opera Software, "The New Opera Browser for Series 60 Features Zoom and Password Manager", Press Releases Database, Available online at: http://pressreleases.techwhack.com/1334/1411-opera-browser-features-zoom-and-password, Nov. 14, 2005, 3 pages.
Palme et al., "MIME Encapsulation of Aggregate Documents, such as HTML", Network Working Group, 1999, 24 pages.
Palmone, "Your Mobile Manager", Chapter 2, LifeDrive™ User's Guide, Available online at: http://www.palm.com/us/support/handbooks/lifedrive/en/lifedrive_handbook.pdf, 2005, 23 pages.
Perlin et al., "Pad: An Alternative Approach to the Computer Interface", Courant Institute of Mathematical Sciences, 1993, pp. 57-64.
Petition for Inter Partes Review of U.S. Pat. No. 7,864,163, pp. 1-225.
Playing QuickTime Movies, Available online at: http://www.3schools.com/media/media_quicktime.asp?output=print, 2006, 2 pages.
Playing Videos on The Web, Available online at: http://www.w3schools.com/media/media_browservideos.asp?out=print, 2006, 3 pages.
Pleading notes Mr. B.J. Berghuis van Woortman, in matter of *Apple Inc.* vs *Samsung Electronics*, Case No. KG ZA 11-730 and KG ZA 11-731, Aug. 10-11, 2010, pp. 1-16.
Pleading notes Mr. Kleemans, Mr. Blomme and Mr. Van Oorschot, in matter of *Apple Inc.* vs *Samsung Electronics*, Case No. KG ZA 11-730 and KG ZA 11-731, Aug. 10, 2011, 35 pages.
Portableapps, "VLC Media Player Portable", Available online at: https://portableapps.com/apps/music_video/vlc_portable, Aug. 21, 2006, 1 page.
Raman et al., "Application-Specific Workload Shaping in Multimedia-Enabled Personal Mobile Devices", CODES+ISSS, Oct. 22-25, 2006, pp. 4-9.
Raman T., "Eyes-Free User Interaction", Google Research, Available online at: http://emacspeak.sf.net/raman, Feb. 9, 2009, 25 pages.
Robie Jonathan, "What is the Document Object Model?", Texcel Research, Available online at http://www.w3.org/TR-DOM/introduction.html, 2006, 5 pages.
Rohrer Tim, "Metaphors We Compute by: Bringing Magic into Interface Design", Available online at: http://www.uoregon.edu/-uophil/metaphor/gui4web.htm, retrieved on Jun. 13, 2006, 7 pages.
Roto et al., "Minimap—A Web Page Visualization Method for Mobile Phones", Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, Apr. 22-27, 2006, pp. 35-44.
Salmre I., "Characteristics of Mobile Applications", Chapter 2, Salmre_02.fm, Dec. 20, 2004, pp. 19-36.
Samsung Electronics GmbH vs *Apple Inc.*, "List scrolling and document translation, scaling and rotation on a touch-screen display", Opposition, Jan. 30, 2012, 27 pages.
Samsung Electronics vs *Apple Inc.*, Statement of Defense Also Counterclaim, Case No. KG ZA 2011-730, Jul. 20, 2011, 44 pages.
Samsung Electronics vs *Apple Inc.*, Statement of Defense Also Counterclaim, Case No. KG ZA 2011-731, Jul. 20, 2011, 48 pages.
Schmandt et al., "A Conversational Telephone Messaging System", IEEE Transactions on Consumer Electronics, vol. CE-30, Aug. 1984, pp. 21-24.
Schmandt et al., "Phone Slave: A Graphical Telecommunications Interface", Proceedings of the SID, vol. 26, No. 1, 1985, 4 pages.
Schmandt et al., "Phone Slave: A Graphical Telecommunications Interface", Society for Information Display, International Symposium Digest of Technical Papers, Jun. 1984, 4 pages.
Schreiner Tony, "High DPI in IE: Tip & Mystery Solved", Tony Schreiner's Blog, Available online at http://blogs.msdn.com/tonyschr/archive/2004/05/126305.aspx, May 2004, 2 pages.
Stampfli Tracy, "Exploring Full-Screen Mode in Flash Player 9", Available online at http://www.adobe.com/devnet/flashplayer/articles/full_screen_mode.html, Nov. 14, 2006, 2 pages.
Stanek et al., "Video and Animation Plug-Ins", Chapter 9, Web Publishing Professional Reference Edition, Available online at: http://www.ssuet.edu.pk/taimoor/books/1-57521-198-X/index.htm, 1997, 18 pages.
Summons to Attend Oral Proceeding received for European Patent Application No. 12169786.6, mailed on Aug. 29, 2018, 9 pages.
Summons to Attend Oral Proceeding received for European Patent Application No. 12169786.6, mailed on Jul. 31, 2014, 3 pages.
Summons to Attend Oral Proceeding received for German Patent Application No. 112007002107.1, mailed on Jul. 11, 2018, 12 pages.
Summons to Attend Oral Proceedings received for European Patent Application No. 07814690.9, mailed on Nov. 22, 2011, 4 pages.
Summons to Attend Oral Proceedings received for European Patent Application No. 07841980.1, mailed on Sep. 28, 2012, 8 pages.
Summons to Attend Oral Proceedings received for European Patent Application No. 07869929.5, mailed on Dec. 13, 2011, 6 pages.
Summons to Attend Oral Proceedings received for European Patent Application No. 07869929.5, mailed on Jan. 23, 2012, 1 page.
Summons to attend oral proceedings received for European Patent Application No. 09171787.6, mailed on Sep. 11, 2015, 2 pages.
Summons to Attend Oral Proceedings received for European Patent Application No. 17171177.3, mailed on Apr. 21, 2020, 5 pages.
Summons to Attend Oral Proceedings received for European Patent Application No. 17171177.3, mailed on Jul. 26, 2019, 6 pages.
Summons to Oral Proceeding received for European Patent Application No. 12169786.6, mailed on Dec. 12, 2016, 9 pages.
Summons to Oral Proceeding received for European Patent Application No. 12169786.6, mailed on Oct. 9, 2020, 15 pages.
Summons to Oral Proceedings received for European Patent Application No. 07814690.9, mailed on Feb. 1, 2016, 12 pages.
Surfin'Safari,"XUL", Available online at: http://weblogs.mozillazine.org/hyatt.archives/2003_10.html, Oct. 2003, 7 pages.
Tidwell Jenifer, "Animated Transition", Designing Interfaces, Patterns for effective Interaction Design, First Edition, Nov. 2005, 4 pages.
Tidwell Jenifer, "Designing Interfaces, Animated Transition", Archived by Internet Wayback Machine, Available online at: https://web.archive.org/web/20060205040223/http://designinginterfaces.com:80/AnimateTransition, retrieved on Mar. 20, 2018, 2005, 2 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Versiontracker, "Photogather-7.2.6. Hi-res Image Viewer & Editor for Palm", Available online at: http://www.versiontracker.com/dyn/moreinfo/palm/4624, retrieved on Jun. 12, 2006, 5 pages.
Warabino et al., "Video Transcoding Proxy for SGwireless Mobile Internet Access", IEEE Communications Magazine, vol. 38, No. 10, Oct. 2000, pp. 66-71.
Wave Technologies International Inc., "Certified Internet Webmaster Foundations Study Guide", A Thomson Learning Company, CIWF-SGMN-0101A, copyright 1988-2000, 88 pages.
Weblogs, "An Overview of WebCore", Chapter 2, WebCore Documentation, Available online at: http:/lweblogs.mozillazine.org/hyatt/WebCore/chapter2.html, 2006, 3 pages.
Weblogs, "Downloading and Building WebCore", Chapter 1, WebCore Documentation, Available online at: http://weblogs.mozillazine.org/hyatt/WebCore/chapter1.html, 2006, 2 pages.
Webmasterworld.com, "Page Zooming with IE-Hidden Feature!", Available online at: http://www.webmasterworld.com/forum83/4179.htm, Jul. 2004, 7 pages.
Wikipedia, "Comparison of Layout Engines", The free encyclopedia, Available online at: http://en.wikipedia.org/wiki/Comparison_of_layout_engines, 2006, 3 pages.
Wikipedia, "History of YouTube", The Free Encyclopedia, Available online at: http://en.wikipedia.org/wiki/History_of_YouTube, retrieved on Mar. 15, 2011, 4 pages.
Wikipedia, "KDE", The free encyclopedia, Available online at: http://en.wikipedia.org/wiki/KDE, 2006, 9 pages.
Wikipedia, "KHTML", The free encyclopedia, Available online at: http://en.wikipedia.org/wiki/KHTML, 2006, 3 pages.
Wikipedia, "List of Layout Engines", The Free Encyclopedia, Available online at: http://en.wikipedia.org/wiki/List_of_layout_engines, 2006, 1 page.
Williams Martyn, "LG's Cell Phone Can Pause Live TV", PC World, Oct. 11, 2005, 2 pages.
Wobbrock et al., "WebThumb: Interaction Techniques for Small-Screen Browsers", UIST'02, Paris France, Oct. 27-30, 2002, pp. 205-208.
Xiao et al., "Slicing-Tree Based Web Page Transformation for Small Displays", International Conference on Information and Knowledge Management, Oct. 31-Nov. 5, 2005, 2 pages.
Xie et al., "Efficient Browsing of Web Search Results on Mobile Devices Based on Block Importance Model", Microsoft Research Asia, 2005, 10 pages.
Yin et al., "Using Link Analysis to Improve Layout on Mobile Devices", Proceedings of the 13th international conference on World Wide Web, Available online at: http://www.iw3c2.org/WWW2004/docs/1p338.pdf, May 17-22, 2004, pp. 338-344.
Youtube, "Broadcast Yourself", Available online at: www.youtube.com, Nov. 1, 2005, 2 pages.
Youtube, "Broadcasting Ourselves", The Official YouTube blog Available online at: http://youtube-global.blogspot.in/2005_11_01_archive.html, Nov. 15, 2005, 5 pages.
Zytronic, "Touchscreen User Manual Zytronic X-Y Controller (Serial and USB)", XP007916436, Nov. 17, 2006, pp. 1-51.
Advisory Action received for U.S. Appl. No. 10/308,315, dated Jul. 10, 2006, 3 pages.
Appeal Brief received for U.S. Appl. No. 11/522,167 mailed on Nov. 23, 2010, 65 pages.
Decision to Refuse received for European Patent Application No. 10177096.4, dated Feb. 13, 2019, 4 pages.
Digital Video Editor, IBM Technical Disclosure Bulletin, vol. 35, No. 2, ip.com Journal, ip.com Inc., West Henrietta XP013097273, Jul. 1, 1992, 6 pages.
Examiner's Answer to Appeal Brief received for U.S. Appl. No. 11/522,167 mailed on Feb. 15, 2011, 13 pages.
Extended European Search Report for European Application No. 10177099.8, dated Oct. 18, 2010, 7 pages.
Extended European Search Report received for European Patent Application No. 07019528.4, dated Nov. 28, 2007, 7 pages.
Extended European Search Report received for European Patent Application No. 10177096.4, dated Oct. 18, 2010, 9 pages.
Extended European Search Report received in European Application No. 10161504.5, dated Sep. 22, 2010, 5 pages.
Final Office Action dated Nov. 24, 2010, received in U.S. Appl. No. 11/818,342, dated Nov. 24, 2010, 9 pages.
Final Office Action received for U.S. Appl. No. 09/293,507, dated Apr. 24, 2002, 12 pages.
Final Office Action received for U.S. Appl. No. 09/293,507, dated Feb. 14, 2001, 10 pages.
Final Office Action received for U.S. Appl. No. 10/308,315, dated Apr. 6, 2005, 10 pages.
Final Office Action received for U.S. Appl. No. 10/308,315, dated Mar. 9, 2006, 10 pages.
Final Office Action received for U.S. Appl. No. 10/308,315, dated Mar. 23, 2007, 12 pages.
Final Office Action received for U.S. Appl. No. 11/522,167, dated Aug. 5, 2009, 9 pages.
Final Office Action received for U.S. Appl. No. 11/522,167, dated Jul. 23, 2010, 11 pages.
Final Office Action received for U.S. Appl. No. 11/522,167, dated Jun. 3, 2013, 18 pages.
Final Office Action received for U.S. Appl. No. 11/522,167, dated Oct. 15, 2008, 10 pages.
Final Office Action received for U.S. Appl. No. 11/818,342, dated Oct. 14, 2010, 14 pages.
Final Office Action received for U.S. Appl. No. 11/968,067, dated Feb. 29, 2012, 15 pages.
Final Office Action received for U.S. Appl. No. 11/983,059, dated Jun. 6, 2011, 11 pages.
Final Office Action received for U.S. Appl. No. 14/045,544, dated May 6, 2016, 26 pages.
International Preliminary Report on Patentability received for PCT Patent Application No. PCT/US2007/089162, dated Jul. 7, 2009, 10 pages.
International Preliminary Report on Patentability received for PCT Patent Application No. PCT/US00/010441, dated Feb. 14, 2001, 3 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US00/10441, dated Jul. 11, 2000, 2 pages.
International Search Report and Written Opinion received for PCT Patent Application No. PCT/US2007/089162, dated Mar. 25, 2008, 12 pages.
Minutes of the Oral Proceedings received for European Patent Application No. 00923491.5, mailed on May 11, 2011, 69 pages.
Non-Final Office Action received for U.S. Appl. No. 11/818,342, dated Jul. 19, 2010, 16 pages.
Non-Final Office Action received for U.S. Appl. No. 09/293,507, dated Aug. 1, 2001, 13 pages.
Non-Final Office Action received for U.S. Appl. No. 09/293,507, dated Jun. 22, 2000, 11 pages.
Non-Final Office Action received for U.S. Appl. No. 09/293,508, dated Jun. 30, 2000, 10 pages.
Non-Final Office Action received for U.S. Appl. No. 10/308,315, dated Aug. 8, 2005, 12 pages.
Non-Final Office Action received for U.S. Appl. No. 10/374,013, dated Feb. 1, 2007, 8 pages.
Non-Final Office Action received for U.S. Appl. No. 11/521,740, dated Dec. 27, 2007, 8 pages.
Non-Final Office Action received for U.S. Appl. No. 11/522,167, dated Dec. 6, 2012, 15 pages.
Non-Final Office Action received for U.S. Appl. No. 11/522,167, dated Feb. 5, 2009, 9 pages.
Non-Final Office Action received for U.S. Appl. No. 11/522,167, dated Jan. 20, 2010, 10 pages.
Non-Final Office Action received for U.S. Appl. No. 11/522,167, dated May 2, 2007, 8 pages.
Non-Final Office Action received for U.S. Appl. No. 11/522,167, dated Oct. 19, 2007, 10 pages.
Non-Final Office Action received for U.S. Appl. No. 11/818,342, dated Jun. 22, 2010, 12 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Non-Final Office Action received for U.S. Appl. No. 11/968,067, dated Nov. 16, 2011, 14 pages.
Non-Final Office Action received for U.S. Appl. No. 11/983,059, dated Dec. 30, 2010, 11 pages.
Non-Final Office Action received for U.S. Appl. No. 14/045,544, dated Oct. 6, 2015, 20 pages.
Non-Final Office Action received for U.S. Appl. No. 10/308,315, dated Jul. 28, 2004, 10 pages.
Notice of Acceptance received for Australian Patent Application No. 2013263776, dated Jan. 20, 2016, 2 pages.
Notice of Allowance received for Chinese Patent Application No. 201310719094.3, dated Jan. 10, 2017, 2 pages (1 page of English Translation and 1 page of Official Copy).
Notice of Allowance received for U.S. Appl. No. 09/293,507, dated Jul. 25, 2002, 6 pages.
Notice of Allowance received for U.S. Appl. No. 09/293,508, dated Feb. 13, 2001, 5 pages.
Notice of Allowance received for U.S. Appl. No. 10/308,315, dated Aug. 27, 2007, 6 pages.
Notice of Allowance received for U.S. Appl. No. 10/374,013, dated Aug. 27, 2007, 6 pages.
Notice of Allowance received for U.S. Appl. No. 10/374,445, dated May 5, 2006, 7 pages.
Notice of Allowance received for U.S. Appl. No. 10/374,831, dated Sep. 10, 2004, 8 pages.
Notice of Allowance received for U.S. Appl. No. 11/521,740, dated Jul. 24, 2008, 7 pages.
Notice of Allowance received for U.S. Appl. No. 11/818,342, dated Mar. 10, 2011, 8 pages.
Notice of Allowance received for U.S. Appl. No. 11/968,067, dated Dec. 12, 2017, 6 pages.
Notice of Allowance received for U.S. Appl. No. 11/968,067, dated Mar. 2, 2017, 5 pages.
Notice of Allowance received for U.S. Appl. No. 11/968,067, dated May 10, 2017, 8 pages.
Notice of Allowance received for U.S. Appl. No. 11/983,059, dated Feb. 10, 2012, 8 pages.
Notice of Allowance received for U.S. Appl. No. 13/155,310, dated Nov. 1, 2013, 10 pages.
Notice of Non-Compliant Amendment received for U.S. Appl. No. 11/522,167 dated May 14, 2008, 4 pages.
Office Action received for Australian Patent Application No. 2013263776, dated Mar. 20, 2015, 2 pages.
Office Action received for European Patent Application No. 00923491.5, dated Jan. 11, 2010, 6 pages.
Office Action received for European Patent Application No. 00923491.5, dated Mar. 12, 2007, 9 pages.
Office Action received for European Patent Application No. 00923491.5, dated Sep. 11, 2007, 5 pages.
Office Action received for European Patent Application No. 07019528.4, dated Dec. 17, 2009, 3 pages.
Office Action received for European Patent Application No. 10161504.5, dated Oct. 21, 2011, 4 pages.
Office Action received for European Patent Application No. 10177096.4, dated Feb. 20, 2012, 6 pages.
Office Action received for European Patent Application No. 10177096.4, dated Jul. 26, 2017, 8 pages.
Office Action received for European Patent Application No. 10177096.4, dated Jun. 7, 2018, 14 pages.
Office Action received for European Patent Application No. 10177096.4, dated Mar. 21, 2013, 9 pages.
Office Action received for European Patent Application No. 10177099.8, dated Feb. 20, 2012, 5 pages.
Office Action received for European Patent Application No. 10161504.5, dated Jun. 26, 2013, 6 pages.
Office Action received for U.S. Appl. No. 13/155,310, dated Apr. 18, 2013, 10 pages.
On-Line Definition for "Playback", American Heritage Dictionary of the English Language, 4th Edition, 2000, 1 page.
Palm, "Handbook for the Palm™ Zire™ 71 Handheld", XP007901882, Retrieved from the Internet, http://www.palm.com/us/support/handbooks/sire71/zire71_hb_ENG.pdf>, 1998, 270 pages.
Quick Time Movie Player Ver. 2.1.2.59, Current Time Indicator Dragging Operation, Ver. 2.1.2.59, 1996, 1 page.
RealOne Player Version 2.0 Screen Dumps, 2002, 4 pages.
Restriction Requirement received for U.S. Appl. No. 10/374,013, dated Oct. 6, 2006, 4 pages.
Search Report received for European Patent Application No. 00923491.5, dated Jun. 2, 2006, 6 pages.
Search Report received for European Patent Application No. 00923491.5, dated Mar. 6, 2006, 4 pages.
Summon to Attend Oral Proceeding received for European Patent Application No. 10177099.8, mailed on Mar. 20, 2013, 9 pages.
Summons to Attend oral proceedings received for European Patent Application No. 00923491.5, mailed on Jan. 27, 2011, 10 pages.
Summons to Attend Oral Proceedings received for European Patent Application No. 10177096.4, mailed on Sep. 21, 2018, 12 pages.
Windows Media Player for Windows XP version 8.0, 2001, 2 pages.

* cited by examiner

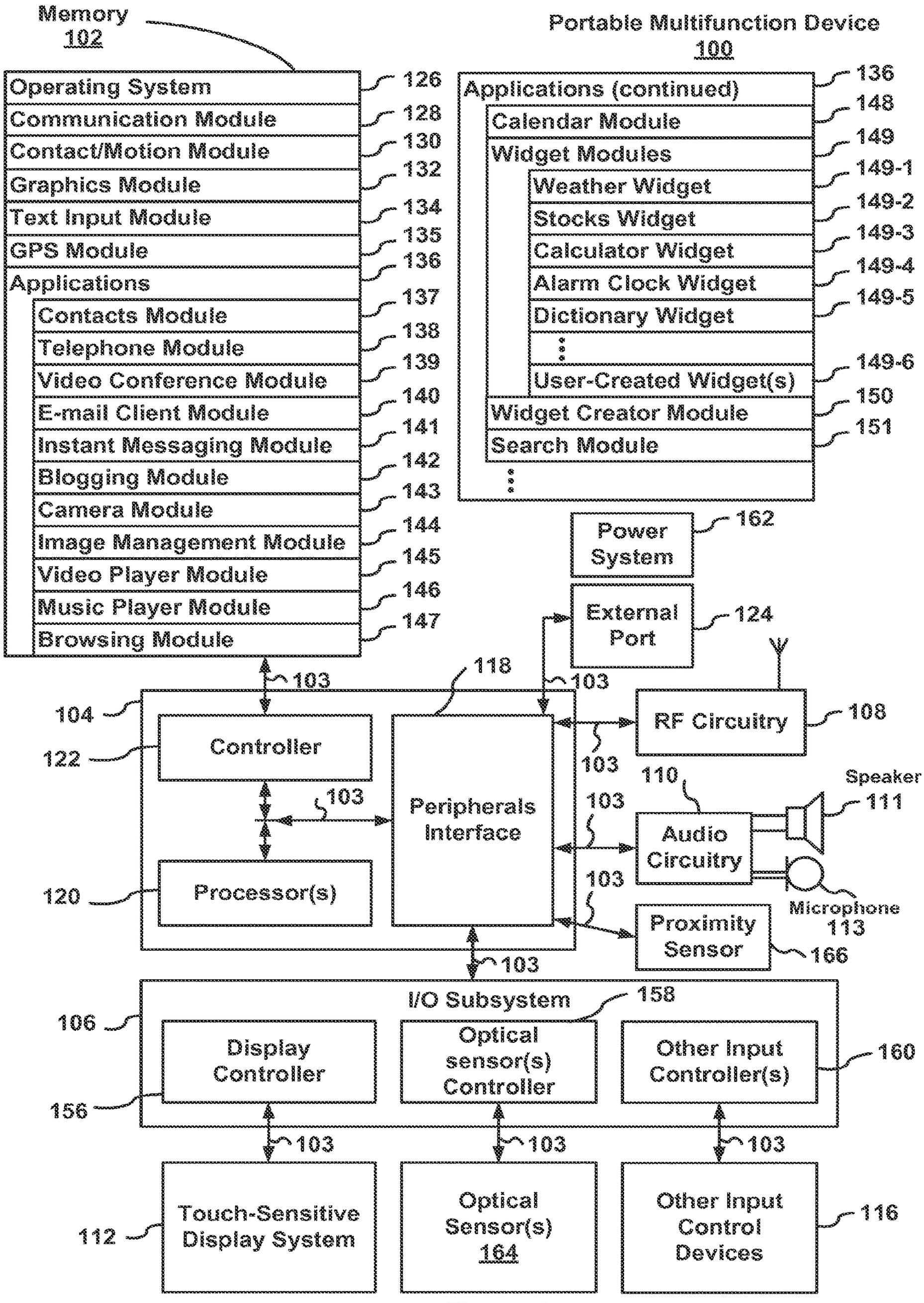

Memory
102
Operating System
126
Communication Module
128
Contact/Motion Module
130
Graphics Module
132
Text Input Module
134
GPS Module
135
Applications
136
Contacts Module
137
Telephone Module
138
Video Conference Module
139
E-mail Client Module
140
Instant Messaging Module
141
Blogging Module
142
Camera Module
143
Image Management Module
144
Video Player Module
145
Music Player Module
146
Browsing Module
147
Portable Multifunction Device
100
Applications (continued)
136
Calendar Module
148
Widget Modules
149
Weather Widget
149-1
Stocks Widget
149-2
Calculator Widget
149-3
Alarm Clock Widget
149-4
Dictionary Widget
149-5
User-Created Widget(s)
149-6
Widget Creator Module
150
Search Module
151
Power System
162
External Port
124
RF Circuitry
108
Speaker
111
Audio Circuitry
110
Microphone
113
Proximity Sensor
166
Controller
122
Peripherals Interface
118
Processor(s)
120
103
104
I/O Subsystem
158
106
Display Controller
Optical sensor(s) Controller
Other Input Controller(s)
160
156
Touch-Sensitive Display System
112
Optical Sensor(s)
164
Other Input Control Devices
116

Figure 1

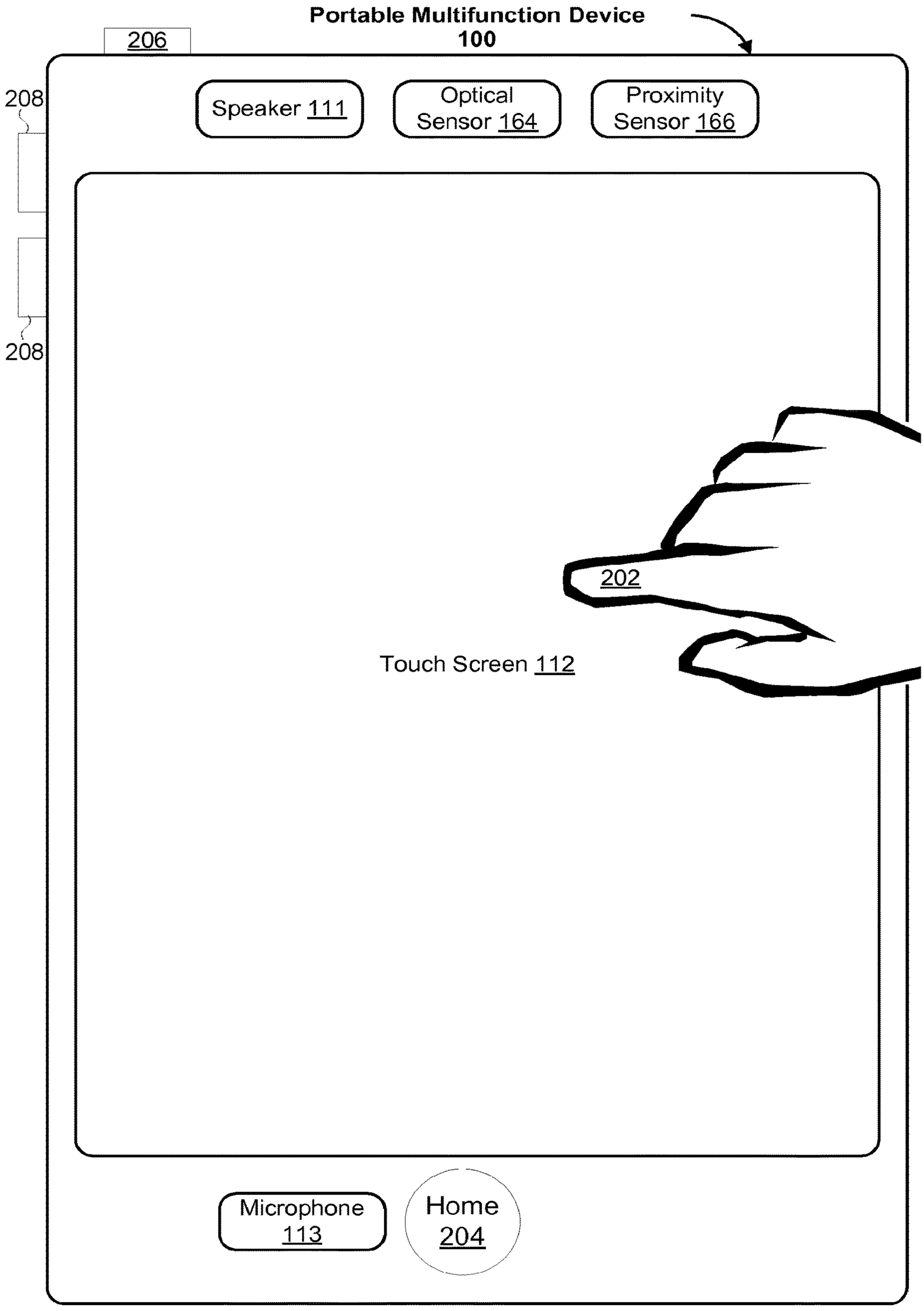

Portable Multifunction Device
100
206
208
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
202
Touch Screen 112
Microphone 113
Home 204

Figure 2

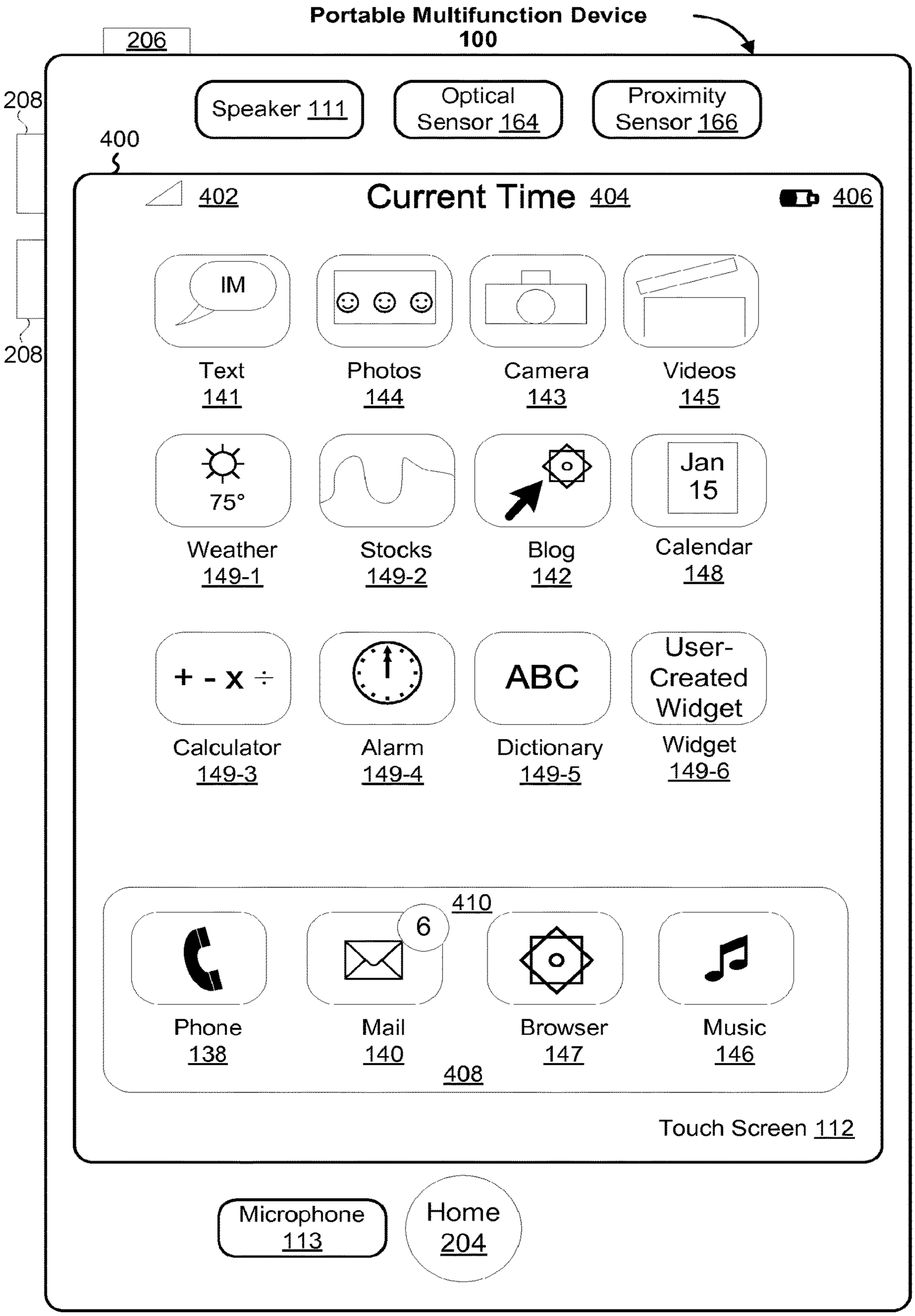

Portable Multifunction Device
100
206
208
208
400
Speaker 111
Optical Sensor 164
Proximity Sensor 166
402
Current Time 404
406
IM
Text
141
Photos
144
Camera
143
Videos
145
75°
Weather
149-1
Stocks
149-2
Blog
142
Jan
15
Calendar
148
+ - x ÷
Calculator
149-3
Alarm
149-4
ABC
Dictionary
149-5
User-Created Widget
Widget
149-6
410
6
Phone
138
Mail
140
Browser
147
Music
146
408
Touch Screen 112
Microphone
113
Home
204

Figure 3

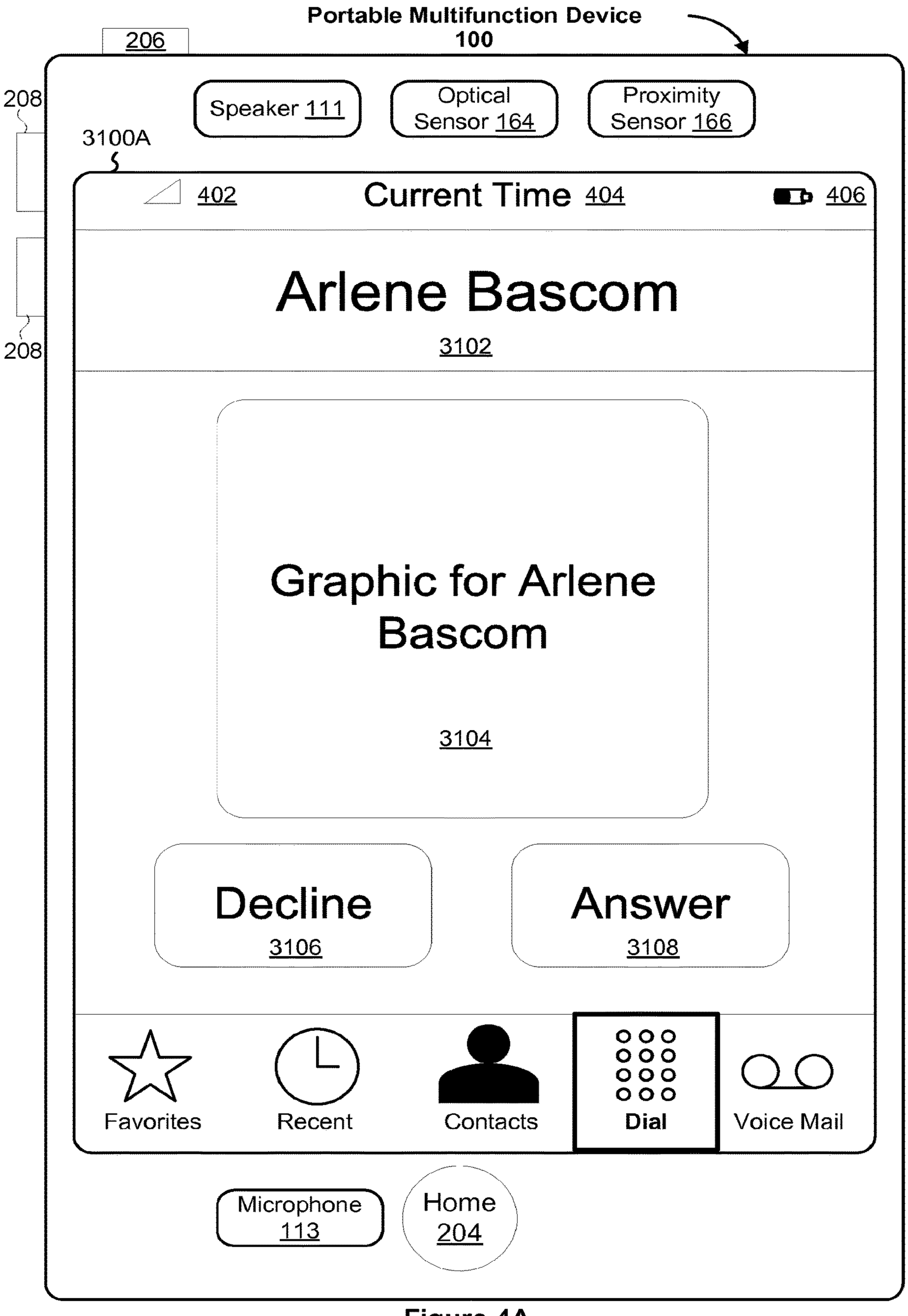

Portable Multifunction Device
100
206
208
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
3100A
402
Current Time 404
406
Arlene Bascom
3102
Graphic for Arlene Bascom
3104
Decline
3106
Answer
3108
Favorites
Recent
Contacts
Dial
Voice Mail
Microphone 113
Home 204

Figure 4A

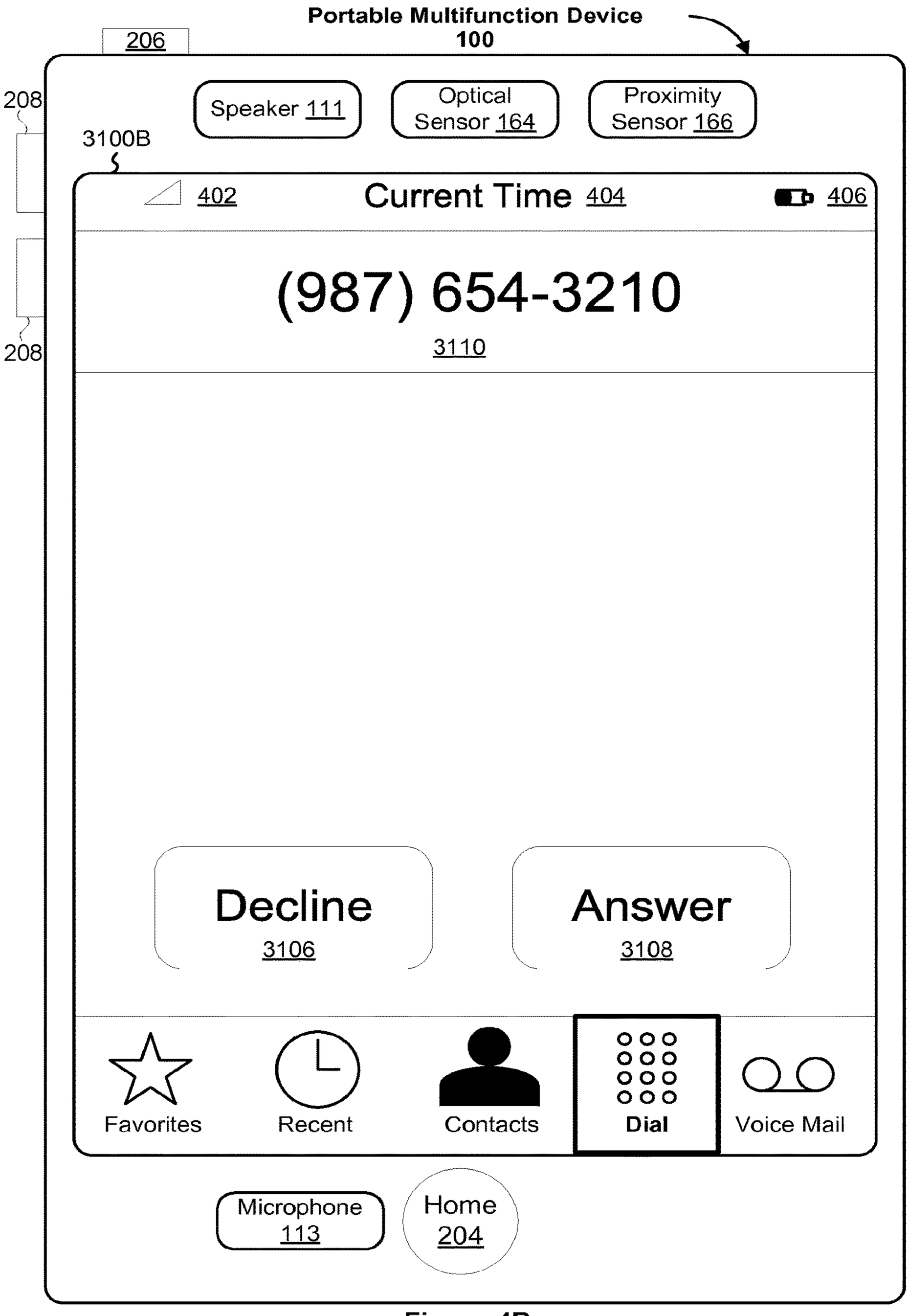

Portable Multifunction Device
100
206
208
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
3100B
402
Current Time 404
406
(987) 654-3210
3110
Decline
3106
Answer
3108
Favorites
Recent
Contacts
Dial
Voice Mail
Microphone 113
Home 204

Figure 4B

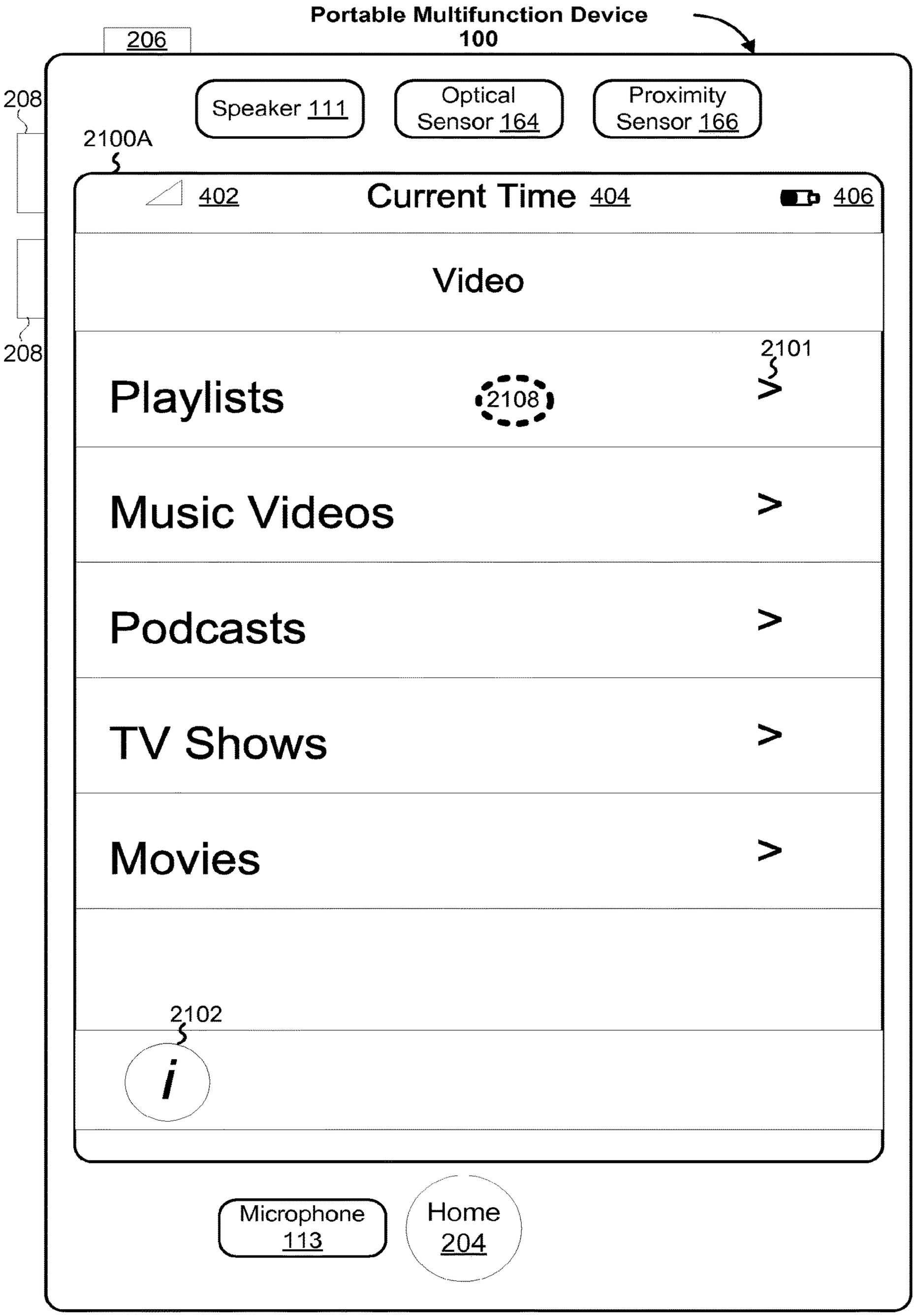

Portable Multifunction Device
100
206
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
2100A
402
Current Time 404
406
Video
2101
Playlists
2108
Music Videos
Podcasts
TV Shows
Movies
2102
i
Microphone 113
Home 204

Figure 5A

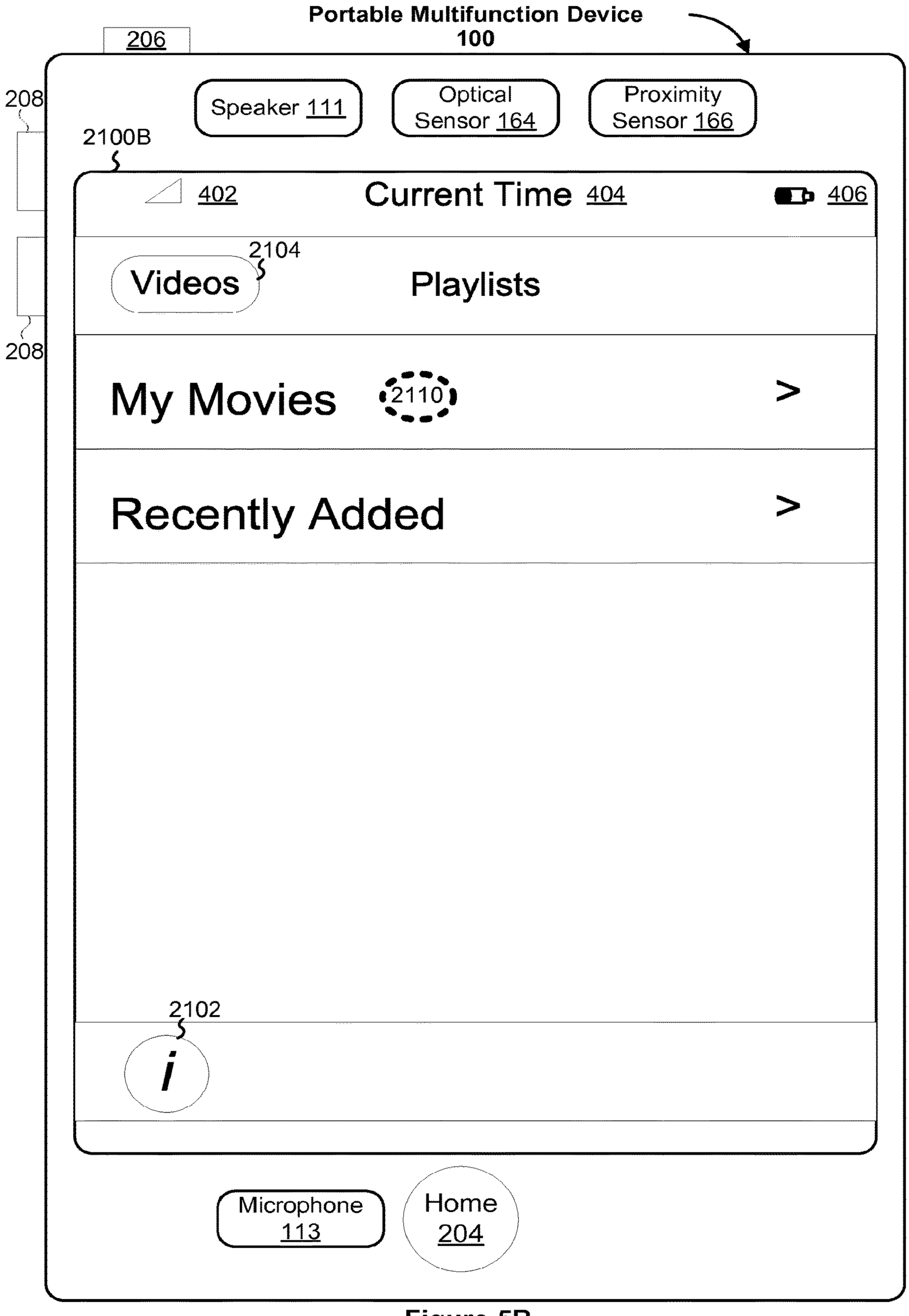

Portable Multifunction Device
100
206
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
2100B
402
Current Time 404
406
2104
Videos
Playlists
My Movies
2110
Recently Added
2102
Microphone 113
Home 204

Figure 5B

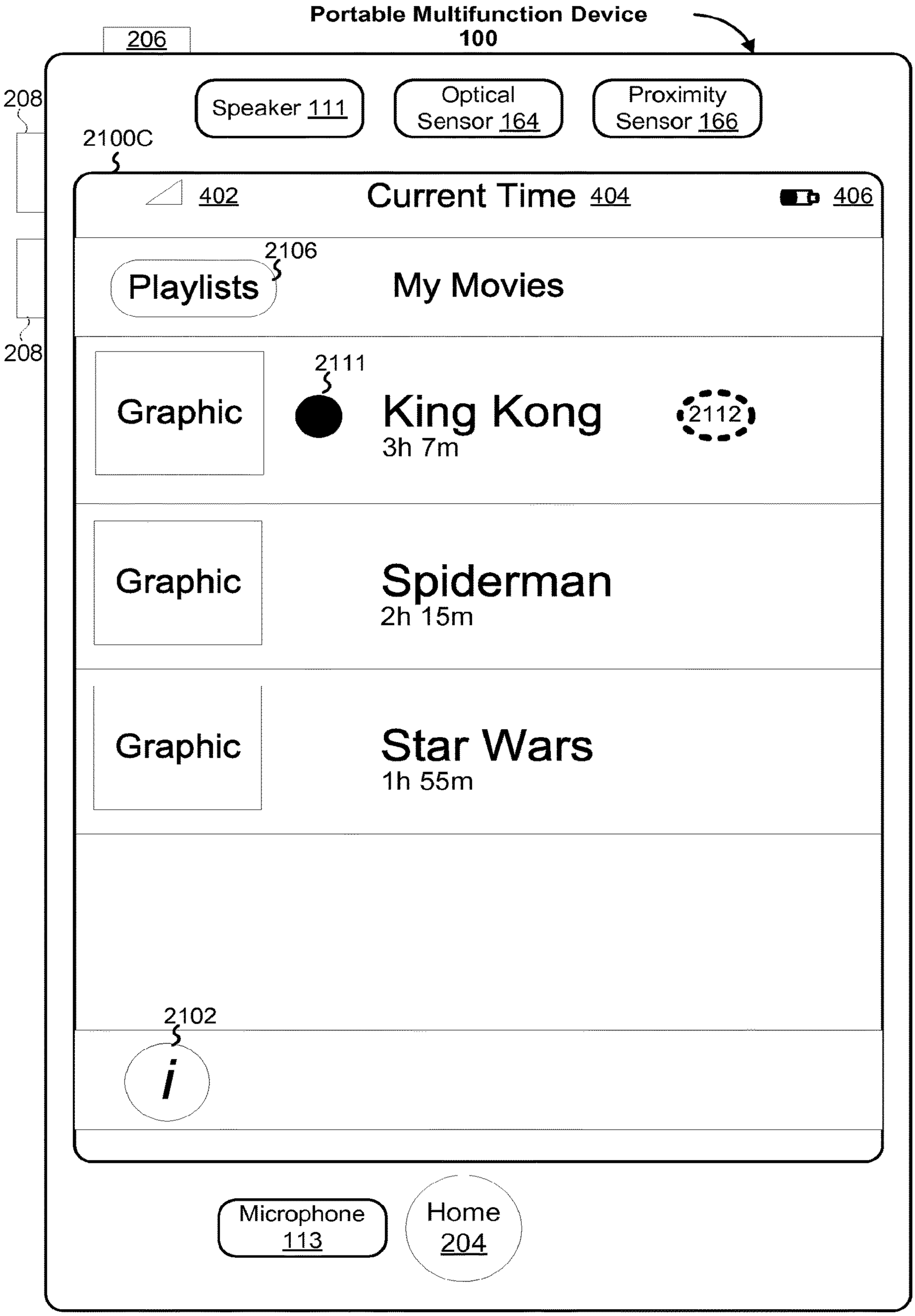

Portable Multifunction Device
100
206
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
2100C
402
Current Time 404
406
2106
Playlists
My Movies
208
Graphic
2111
King Kong
3h 7m
2112
Graphic
Spiderman
2h 15m
Graphic
Star Wars
1h 55m
2102
i
Microphone 113
Home 204

Figure 5C

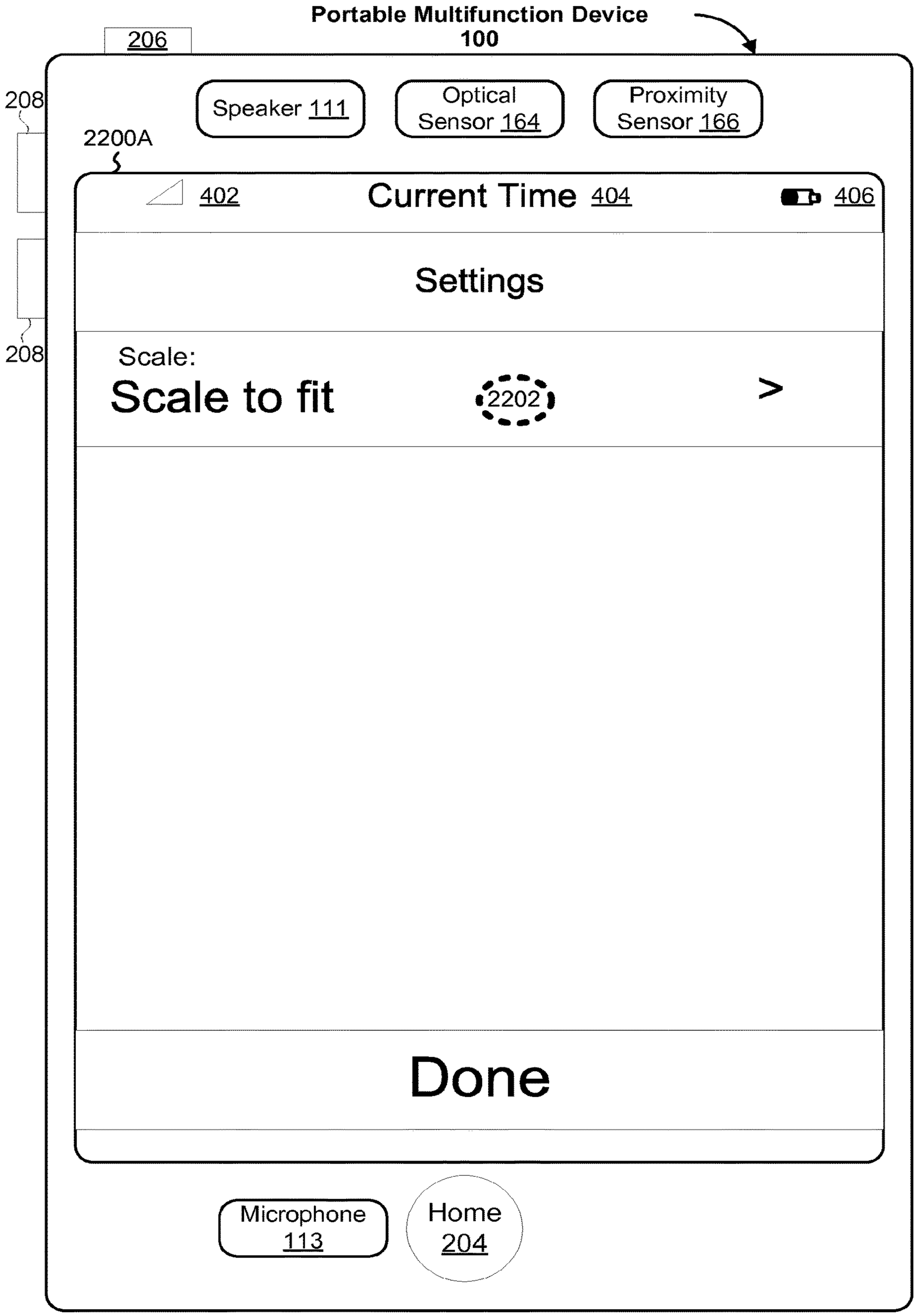

Portable Multifunction Device
100
206
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
2200A
402
Current Time 404
406
Settings
Scale:
Scale to fit
2202
>
208
Done
Microphone 113
Home 204

Figure 6A

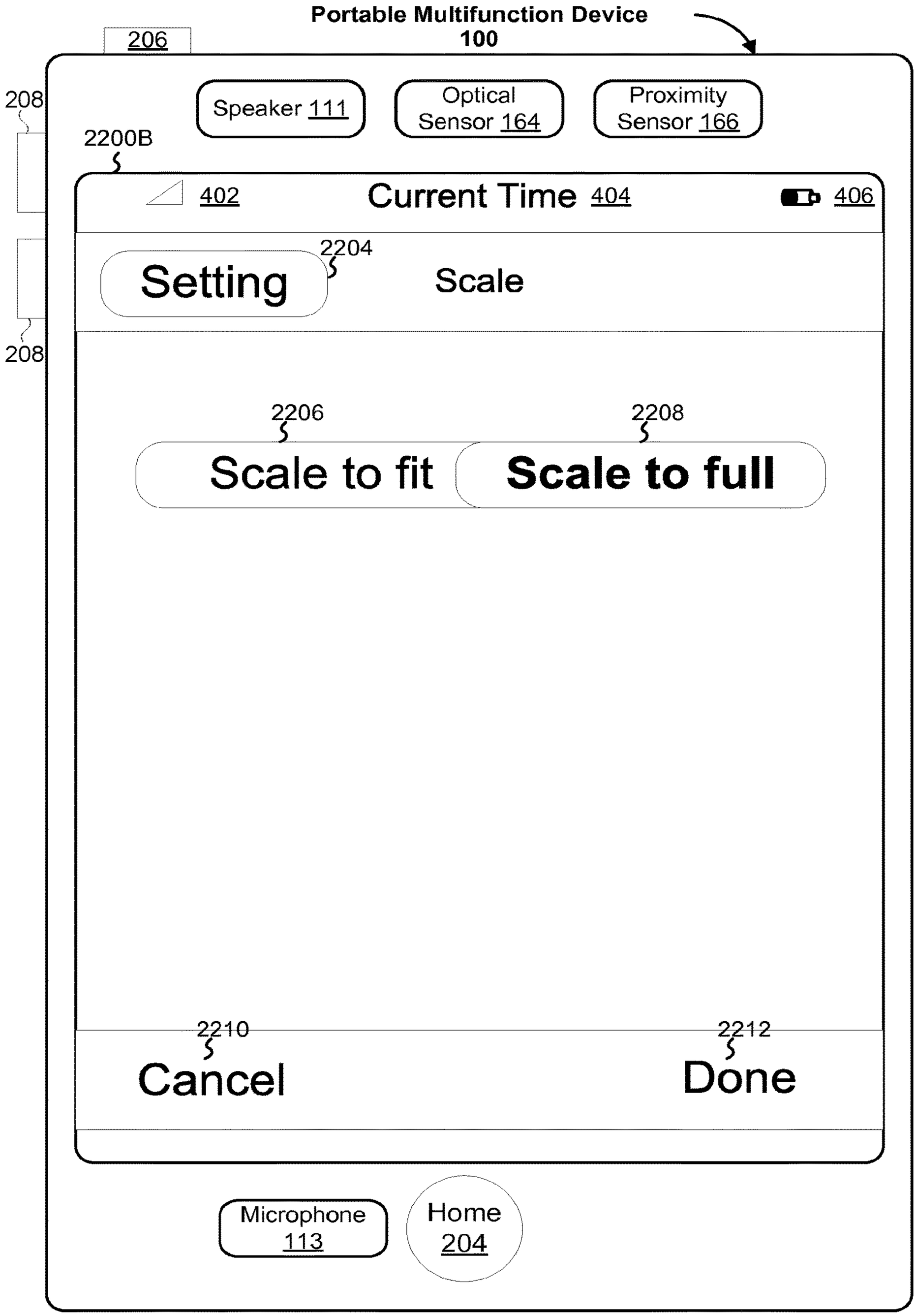

Portable Multifunction Device
100
206
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
2200B
402
Current Time 404
406
2204
Setting
Scale
2206
2208
Scale to fit
Scale to full
2210
2212
Cancel
Done
Microphone 113
Home 204

Figure 6B

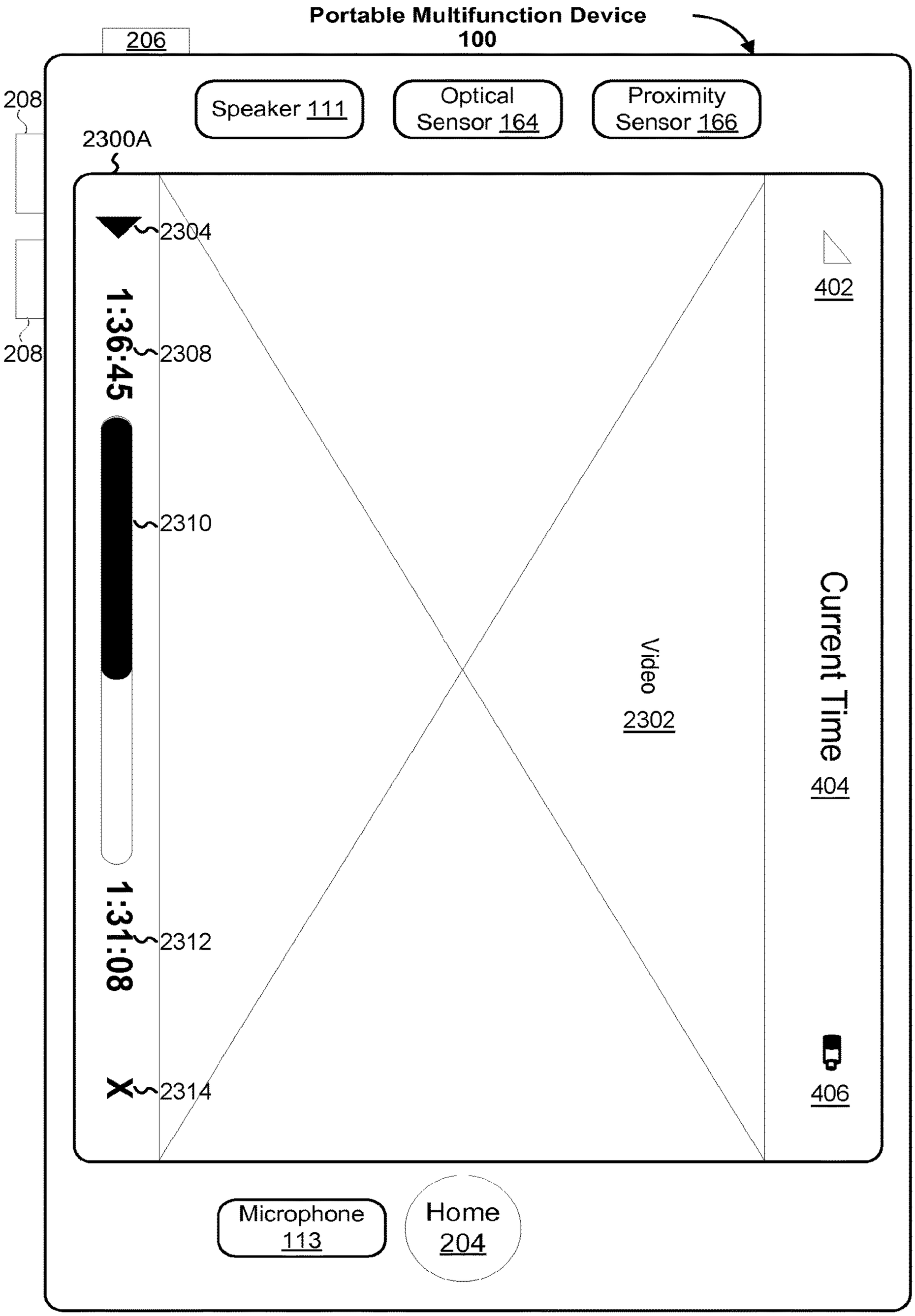

Portable Multifunction Device
100
206
208
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
2300A
2304
1:36:45
2308
2310
1:31:08
2312
X
2314
Video
2302
402
Current Time
404
406
Microphone 113
Home 204

Figure 7A

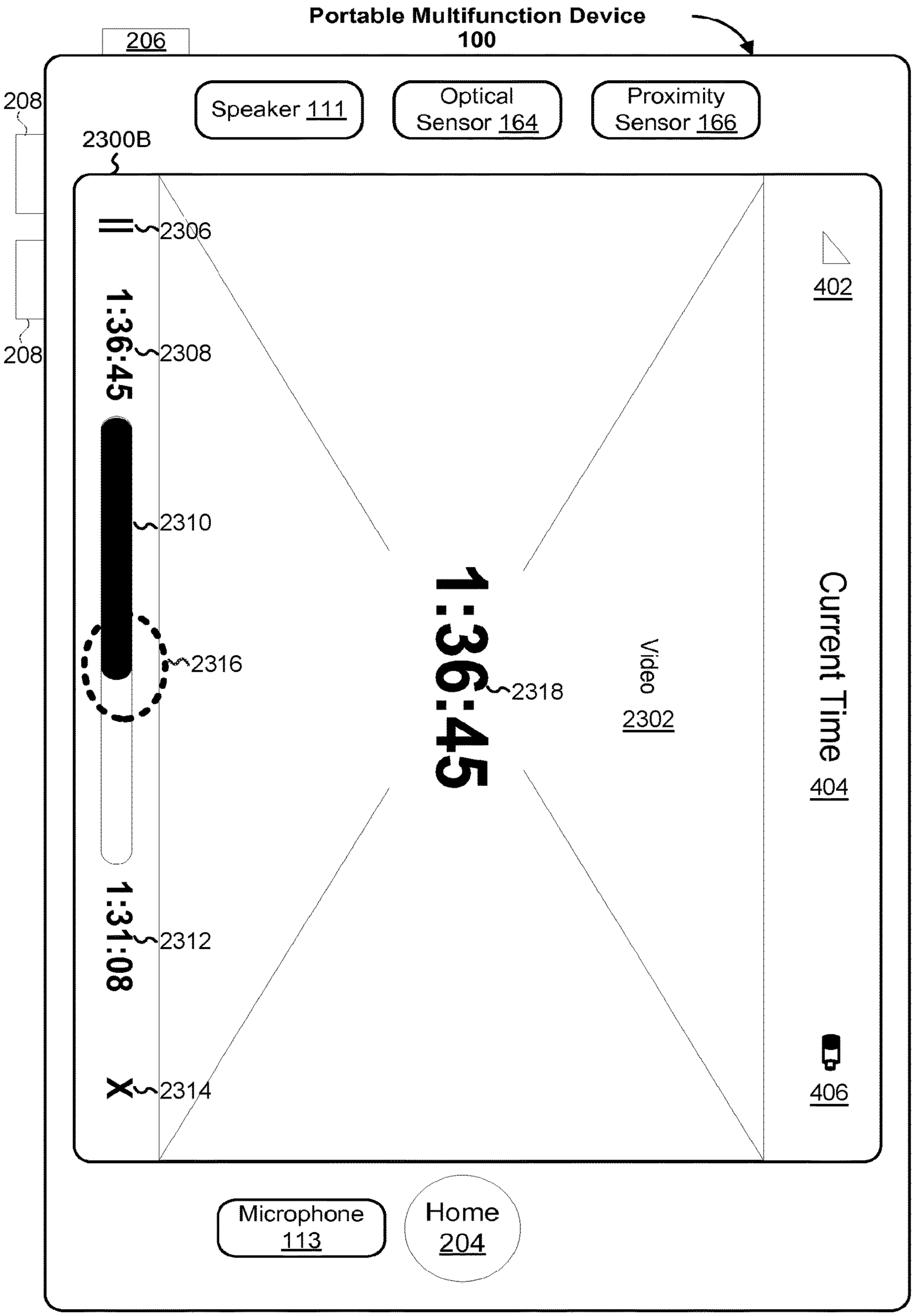

Portable Multifunction Device
100
206
208
208
Speaker 111
Optical Sensor 164
Proximity Sensor 166
2300B
2306
1:36:45
2308
2310
2316
1:31:08
2312
X
2314
1:36:45
2318
Video
2302
402
Current Time
404
406
Microphone
113
Home
204

Figure 7B

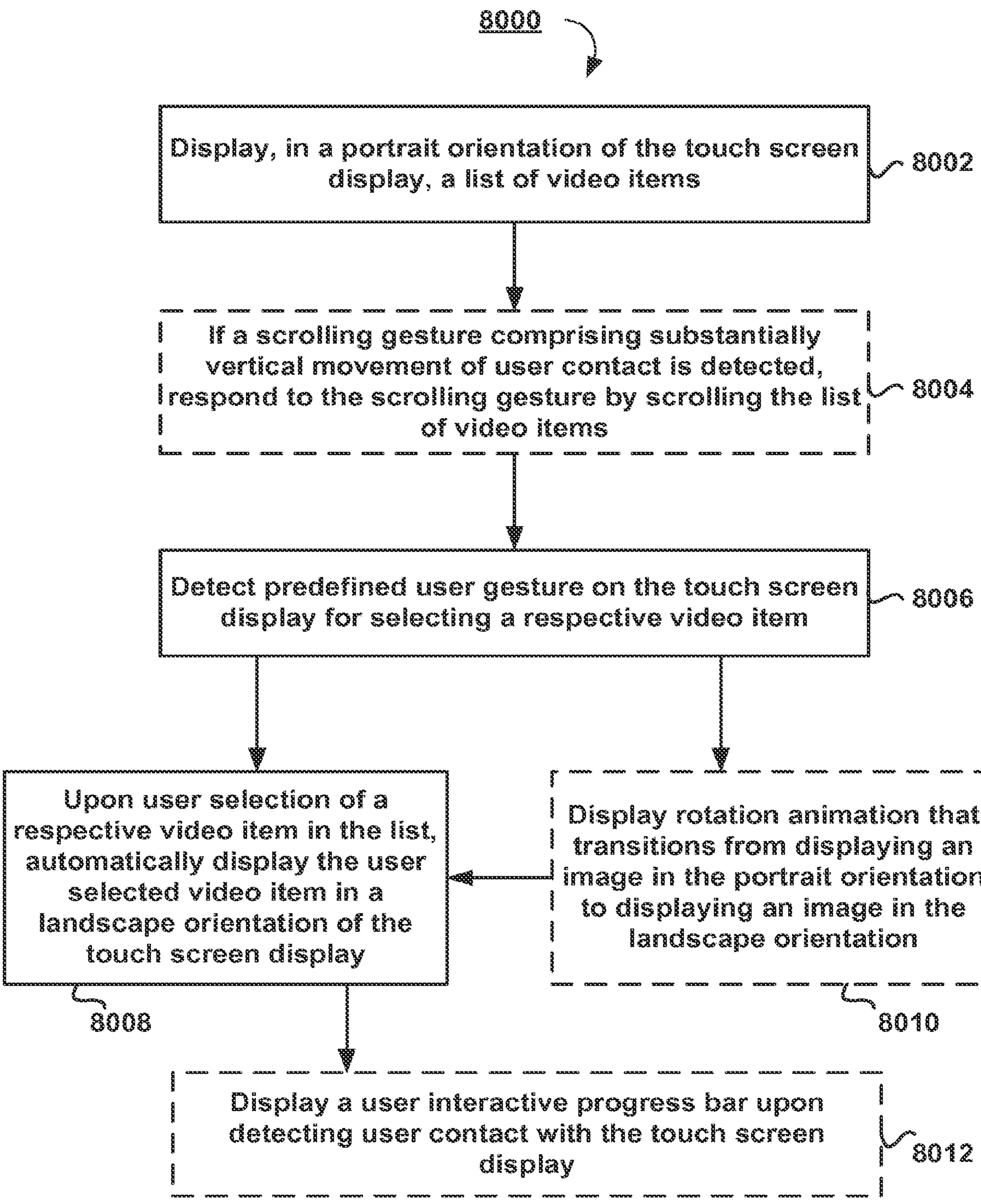

8000
Display, in a portrait orientation of the touch screen display, a list of video items
8002
If a scrolling gesture comprising substantially vertical movement of user contact is detected, respond to the scrolling gesture by scrolling the list of video items
8004
Detect predefined user gesture on the touch screen display for selecting a respective video item
8006
Upon user selection of a respective video item in the list, automatically display the user selected video item in a landscape orientation of the touch screen display
8008
Display rotation animation that transitions from displaying an image in the portrait orientation to displaying an image in the landscape orientation
8010
Display a user interactive progress bar upon detecting user contact with the touch screen display
8012

Figure 8A

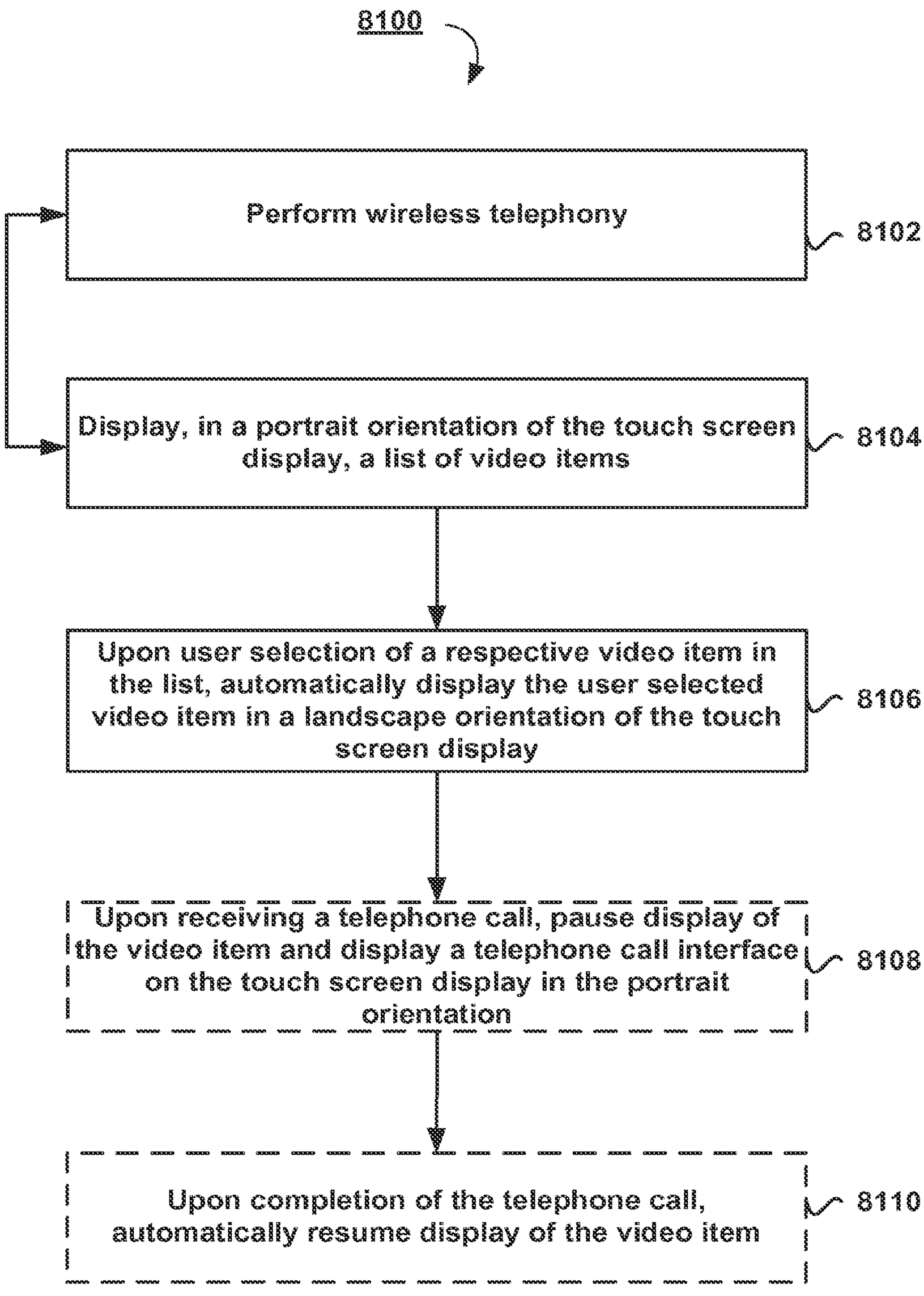

8100
Perform wireless telephony
8102
Display, in a portrait orientation of the touch screen display, a list of video items
8104
Upon user selection of a respective video item in the list, automatically display the user selected video item in a landscape orientation of the touch screen display
8106
Upon receiving a telephone call, pause display of the video item and display a telephone call interface on the touch screen display in the portrait orientation
8108
Upon completion of the telephone call, automatically resume display of the video item
8110

Figure 8B

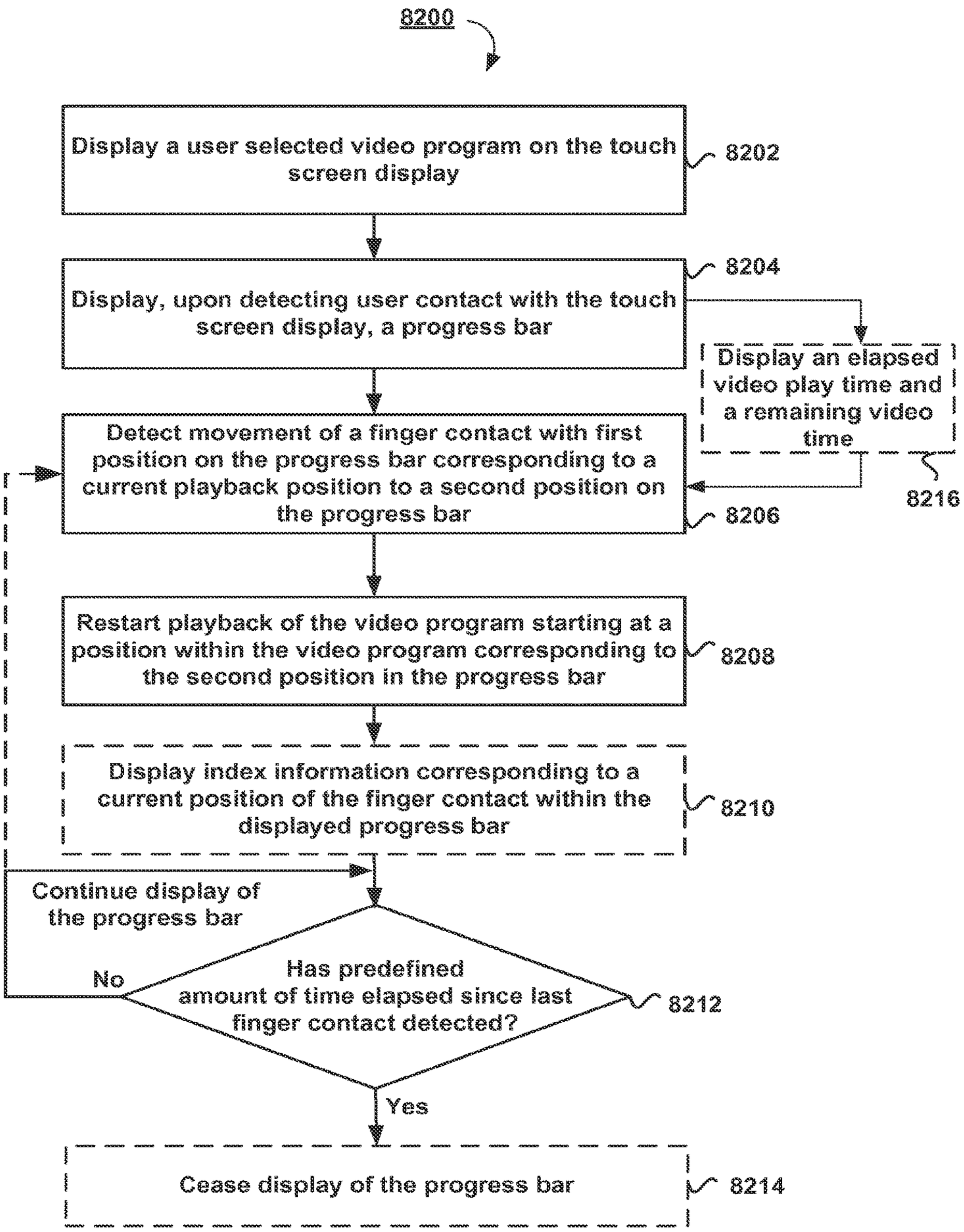

8200
Display a user selected video program on the touch screen display
8202
Display, upon detecting user contact with the touch screen display, a progress bar
8204
Display an elapsed video play time and a remaining video time
8216
Detect movement of a finger contact with first position on the progress bar corresponding to a current playback position to a second position on the progress bar
8206
Restart playback of the video program starting at a position within the video program corresponding to the second position in the progress bar
8208
Display index information corresponding to a current position of the finger contact within the displayed progress bar
8210
Continue display of the progress bar
Has predefined amount of time elapsed since last finger contact detected?
No
8212
Yes
Cease display of the progress bar
8214

Figure 8C

VIDEO MANAGER FOR PORTABLE MULTIFUNCTION DEVICE

RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 14/043,788, filed Oct. 1, 2013, now U.S. Pat. No. 11,023,122, which is a continuation of U.S. patent application Ser. No. 13/155,304, filed Jun. 7, 2011, now U.S. Pat. No. 8,547,355, which is a divisional of U.S. patent application Ser. No. 11/850,008, filed Sep. 4, 2007, now U.S. Pat. No. 7,956,849, which claims priority to U.S. Provisional Patent Application Nos. 60/937,993, "Portable Multifunction Device," filed Jun. 29, 2007; 60/946,973, "Video Manager for Portable Multifunction Device," filed Jun. 28, 2007; 60/883,784, "Video Manager for Portable Multifunction Device" filed Jan. 6, 2007; 60/879,469, "Portable Multifunction Device," filed Jan. 8, 2007; 60/879,253, "Portable Multifunction Device," filed Jan. 7, 2007; and 60/824,769, "Portable Multifunction Device," filed Sep. 6, 2006. All of these applications are incorporated by referenced herein in their entirety.

This application is related to the following applications: (1) U.S. patent application Ser. No. 10/188,182, "Touch Pad For Handheld Device," filed on Jul. 1, 2002; (2) U.S. patent application Ser. No. 10/722,948, "Touch Pad For Handheld Device," filed on Nov. 25, 2003; (3) U.S. patent application Ser. No. 10/643,256, "Movable Touch Pad With Added Functionality," filed on Aug. 18, 2003; (4) U.S. patent application Ser. No. 10/654,108, "Ambidextrous Mouse," filed on Sep. 2, 2003; (5) U.S. patent application Ser. No. 10/840,862, "Multipoint Touchscreen," filed on May 6, 2004; (6) U.S. patent application Ser. No: 10/903,964, "Gestures For Touch Sensitive Input Devices," filed on Jul. 30, 2004; (7) U.S. patent application Ser. No. 11/038,590, "Mode-Based Graphical User Interfaces For Touch Sensitive Input Devices" filed on Jan. 18, 2005; (8) U.S. patent application Ser. No. 11/057,050, "Display Actuator," filed on Feb. 11, 2005; (9) U.S. Provisional Patent Application No. 60/658,777, "Multi-Functional Hand-Held Device," filed Mar. 4, 2005; and (10) U.S. patent application Ser. No. 11/367,749, "Multi-Functional Hand-Held Device," filed Mar. 3, 2006. All of these applications are incorporated by reference herein.

TECHNICAL FIELD

The disclosed embodiments relate generally to portable electronic devices, and more particularly, to portable devices that are capable of playing digital video.

BACKGROUND

As portable electronic devices become more compact, and the number of functions performed by a given device increase, it has become a significant challenge to design a user interface that allows users to easily interact with a multifunction device. This challenge is particular significant for handheld portable devices, which have much smaller screens than desktop or laptop computers. This situation is unfortunate because the user interface is the gateway through which users receive not only content but also responses to user actions or behaviors, including user attempts to access a device's features, tools, and functions. Some portable communication devices (e.g., mobile telephones, sometimes called mobile phones, cell phones, cellular telephones, and the like) have resorted to adding more

pushbuttons, increasing the density of push buttons, overloading the functions of pushbuttons, or using complex menu systems to allow & user to access, store and manipulate data. These conventional user interfaces often result in complicated key sequences and menu hierarchies that must be memorized by the user.

Many conventional user interfaces, such as those that include physical pushbuttons, are also inflexible. This may prevent a user interface from being configured and/or adapted by either an application running on the portable device or by users. When coupled with the time consuming requirement to memorize multiple key sequences and menu hierarchies, and the difficulty in activating a desired pushbutton, such inflexibility is frustrating to most users.

Many devices that are capable of playing and displaying digital video are the size of small laptops, and are, in fact, not handheld. This proves for more difficult portability. Other devices for playing digital video that are designed to be handheld may only be used in one orientation. The size of the screens of such devices is commonly quite small, and is therefore not conducive to watching digital videos. Moreover, having only one orientation restricts the user interface functionality because some functions (e.g., viewing a list of videos) may be more readily done in a portrait display orientation while other functions (watching a video) may be more readily done in a landscape display orientation, which more fully uses the display to show the video.

Accordingly, there is a need for portable multifunction devices with more transparent and intuitive user interfaces for video playback that are easy to use, configure, and/or adapt.

SUMMARY

The above deficiencies and other problems associated with user interfaces for portable devices are reduced or eliminated by the disclosed portable multifunction device. In some embodiments, the device has a touch-sensitive display (also known as a "touch screen") with a graphical user interface (GUI), one or more processors, memory and one or more modules, programs or sets of instructions stored in the memory for performing multiple functions. In some embodiments, the user interacts with the GUI primarily through finger contacts and gestures on the touch-sensitive display. In some embodiments, in addition to digital video playing, the functions may include telephoning, video conferencing, e-mailing, instant messaging, blogging, digital photographing, digital videoing, web browsing, and/or digital music playing Instructions for performing these functions may be included in a computer readable storage medium or other computer program product configured for execution by one or more processors.

In accordance with some embodiments of the present invention, a computer-implemented method performed at a portable electronic device with a touch screen display includes displaying, in a portrait orientation of the touch screen display, a list of video items. The method also includes automatically displaying, upon user selection of a respective video item in the list, the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a computer-implemented method performed at a portable multifunction device with a touch screen display includes at least two modes of operation. The first mode of operation includes performing wireless telephony. The second mode of operation includes displaying, in a portrait orientation of the touch screen display, a list of video items,

and automatically displaying, upon user selection of a respective video item in the list, the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a computer-implemented method performed at a handheld electronic device with a touch screen display includes displaying a user selected video program on the touch screen display, and displaying an interactive progress bar upon detecting user contact with the touch screen display.

In accordance with some embodiments of the present invention, a portable electronic device for displaying information includes a touch screen display; memory, one or more processors, and one or mote modules stored m memory. The one or more modules are configured For execution by the one or more processors and include instructions for: displaying, in a portrait orientation of the touch screen display, a list of video items; and for execution upon user selection of a respective video item in the list, automatically displaying the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a portable electronic device for displaying information includes a touch screen display; memory, one or more processors, and one or more modules stored in memory. The one or more modules are configured for execution by the one or more processors and include instructions for: in a first mode of operation, performing wireless telephony. The one or more modules also includes instructions for: in a second mode of operation, displaying, in a portrait orientation of the touch screen display, a list of video items; and, for execution upon user selection of a respective video item in the list, automatically displaying the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a portable electronic device for displaying information includes a touch screen display; memory, one or more processors, and one or more modules stored in memory. The one or more modules are configured for execution by the one or more processors and include instructions for: displaying a user selected video program on the touch screen display; and, for execution upon detecting user contact with the touch screen display, displaying a progress bar.

In accordance with some embodiments of the present invention, a computer program product for use in conjunction with a portable electronic device with a touch screen display includes a computer readable storage medium and a computer program mechanism (e.g., one or more computer programs) embedded therein. The computer program mechanism includes instructions for displaying, in a portrait orientation of the touch screen display, a list of video items. The computer program mechanism also includes instructions, for execution upon user selection of a respective video item in the list, for automatically displaying the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a computer program product for use in conjunction with a portable electronic device with a touch screen display includes a computer readable storage medium and a computer program mechanism (e.g., one or more computer programs) embedded therein. The computer program mechanism comprises instructions for: in a first mode of operation, performing wireless telephony; displaying, in a portrait orientation of the touch screen display, a list of video items; and, for execution upon user selection of a respective video item in the list, automatically displaying the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a computer program product for use in conjunction with a portable electronic device with a touch screen display includes a computer readable storage medium and a computer program mechanism (e.g., one or more computer programs) embedded therein. The computer program mechanism comprises instructions for: displaying a user selected video program on the touch screen display: and, for execution upon detecting user contact with the touch screen display, displaying a progress bar.

In accordance with some embodiments of the present invention, a portable electronic device with a touch screen display includes means for displaying a list of video items in a portrait orientation of the touch screen display. The method also includes means, for execution upon user selection of a respective video item in the list, for automatically displaying the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a portable multifunction device with a touch screen display includes: in a first mode of operation, means for performing wireless telephony. The method also includes; in a second mode of operation means for displaying, in a portrait orientation of the touch screen display, a list of video items; and means, for execution upon user selection of a respective video item in the list, for automatically displaying the user selected video item in a landscape orientation of the touch screen display.

In accordance with some embodiments of the present invention, a handheld electronic device with a touch screen display, includes means for displaying a user selected video program on the touch screen display. The method also includes means, for execution upon detecting user contact with the touch screen display, for displaying an interactive progress bar.

Thus, the invention provides an intuitive, easy-to-use interface for video playback on a portable electronic device with a touch screen display.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the aforementioned embodiments of the invention as well as additional embodiments thereof, reference should be made to the Description of Embodiments below, in conjunction with the following drawings in which like reference numerals refer to corresponding parts throughout the figures.

FIG. **1** is a block diagram illustrating a portable multifunction device with a touch-sensitive display in accordance with some embodiments.

FIG. **2** illustrates a portable multifunction device having a touch screen in accordance with some embodiments.

FIG. **3** illustrates an exemplary user interface for a menu of applications on a portable multifunction device in accordance with some embodiments.

FIGS. **4**A and **4**B illustrate an exemplary user interface displayed during an incoming call in accordance with some embodiments.

FIGS. **5**A-**5**C illustrate an exemplary user interface for organizing and managing videos in accordance with some embodiments.

FIGS. **6**A and **6**B illustrate an exemplary user interface for setting user preferences for a video player in accordance with some embodiments.

FIGS. **7**A and **7**B illustrate an exemplary user interface for a video player in accordance with some embodiments.

FIG. **8**A is a flow diagram of a process for displaying video images in accordance with some embodiments.

FIG. **8**B is a flow diagram of a process for displaying video images in accordance with some embodiments.

FIG. **8**C is a flow diagram of a process for displaying video images in accordance with some embodiments.

DESCRIPTION OF EMBODIMENTS

Reference will now be made in detail to embodiments, examples of which are illustrated in the accompanying drawings. In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be apparent to one of ordinary skill in the art that the present invention may be practiced without these specific details. In other instances, well-known methods, procedures, components, circuits, and networks have not been described in detail so as not to unnecessarily obscure aspects of the embodiments.

Embodiments of a portable multifunction device, user interfaces for such devices, and associated processes for using such devices are described. In some embodiments, the device is a portable communications device such as a mobile telephone that also contains other functions, such as PDA and/or music player functions.

The user interface may include a physical click wheel in addition to a touch screen or a virtual click wheel displayed on the touch screen. A click wheel is a user-interface device that may provide navigation commands based on an angular displacement of the wheel or a point of contact with the wheel by a user of the device. A click wheel may also be used to provide a user command corresponding to selection of one or more items, for example, when the user of the device presses down on at least a portion of the wheel or the center of the wheel. Alternatively, breaking contact with a click wheel image on a touch screen surface may indicate a user command corresponding to selection. For simplicity, in the discussion that follows, a portable multifunction device that includes a touch screen is used as an exemplary embodiment. It should be understood, however, that some of the user interfaces and associated processes may be applied to other devices, such as personal computers and laptop computers, which may include one or more other physical user-interface devices, such as a physical click wheel, a physical keyboard, a mouse and/or a joystick.

In some embodiments, in addition to the digital video player application, the device supports a variety of applications, such as one or more of the following: a telephone application, a video conferencing application, an e-mail application, art instant messaging application, a blogging application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, and/or a digital music player application.

The various applications that may be executed on the device may use at least one common physical user-interface device, such as the touch screen. One or more functions of the touch screen as well as corresponding information displayed on the device may be adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch screen) of the device may support the variety of applications with user interfaces that are intuitive and transparent.

The user interfaces may include one or more soft keyboard embodiments. The soft keyboard embodiments may include standard (QWERTY) and/or non-standard configurations of symbols on the displayed icons of the keyboard, such as those described in U.S. patent application Ser. No. 11/459,606, "Keyboards For Portable Electronic Devices," filed Jul. 24, 2006, and Ser. No. 11/459,615, "Touch Screen Keyboards For Portable Electronic Devices," filed Jul. 24, 2006, the contents of which are hereby incorporated by reference. The keyboard embodiments may include a reduced number of icons (or soft keys) relative to the number of keys in existing physical keyboards, such as that for a typewriter. This may make it easier for users to select one or more icons in the keyboard, and thus, one or more corresponding symbols. The keyboard embodiments may be adaptive. For example, displayed icons may be modified in accordance with user actions, such as selecting one or more icons and/or one or more corresponding symbols. One or more applications on the portable device may utilize common and/or different keyboard embodiments. Thus, the keyboard embodiment used may be tailored to at least some of the applications. In some embodiments, one or more keyboard embodiments may be tailored to a respective user. For example, based on a word usage history (lexicography, slang, individual usage) of the respective user. Some of the keyboard embodiments may be adjusted to reduce a probability of a user error when selecting one or more icons, and thus one or more symbols, when using the soft keyboard embodiments.

Attention is now directed towards embodiments of the device. FIG. **1** is a block diagram illustrating a portable multifunction device **100** with a touch-sensitive display **112** in accordance with some embodiments. The touch-sensitive display **112** is sometimes called a "touch screen" for convenience, and may also be known as or called a touch-sensitive display system. The device **100** may include a memory **102** (which may include one or more computer readable storage mediums), a memory controller **122**, one or more processing units (CPU's) **120**, a peripherals interface **118**, RF circuitry **108**, audio circuitry **110**, a speaker **111**, a microphone **113**, an input/output (I/O) subsystem **106**, other input or control devices **116**, and an external port **124**. The device **100** may include one or more optical sensors **164**. These components may communicate over one or more communication buses or signal lines **103**.

It should be appreciated that the device **100** is only one example of a portable multifunction device **100**, and that the device **100** may have more or fewer components than shown, may combine two or more components, or a may have a different configuration or arrangement of the components. The various components shown in FIG. **1** may be implemented in hardware, software or a combination of both hardware and software, including one or more signal processing and/or application specific integrated circuits.

Memory **102** may include high-speed random access memory and may also include non-volatile memory, such as one or more magnetic disk storage devices, flash memory devices, or other non-volatile solid-state memory devices. Access to memory **102** by other components of the device **100**, such as the CPU **120** and the peripherals interface **118**, may be controlled by the memory controller **122**.

The peripherals interface **118** couples the input and output peripherals of the device to the CPU **120** and memory **102**. The one or more processors **120** run or execute various

software programs and/or sets of instructions stored in memory **102** to perform various functions for the device **100** and to process data.

In some embodiments, the peripherals interface **118**, the CPU **120**, and the memory controller **122** may be implemented on a single chip, such as a chip **104**. In some other embodiments, they may be implemented on separate chips.

The RF (radio frequency) circuitry **108** receives and sends RF signals, also called electromagnetic signals. The RF circuitry **108** converts electrical signals to/from electromagnetic signals and communicates with communications networks and other communications devices via the electromagnetic signals. The RF circuitry **108** may include well-known circuitry for performing these functions, including but not limited to an antenna system, an RF transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a CODEC chipset, a subscriber identity module (SIM) card, memory, and so forth. The RF circuitry **108** may communicate with networks, such as the Internet, also referred to as the World Wide Web (WWW), an intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN), and other devices by wireless communication. The wireless communication may use any of a plurality of communications standards, protocols and technologies, including but not limited to Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a, IEEE 802.11b, IEEE 802.1 Ig and/or IEEE 802.11n) voice over Internet Protocol (VoIP), Wi-MAX, a protocol for email, instant messaging, and/or Short Message Service (SMS)), or any other suitable communication protocol, including communication protocols not yet developed as of the filing date of this document.

The audio circuitry **110**, the speaker **111**, and the microphone **113** provide an audio interface between a user and the device **100**. The audio circuitry **110** receives audio data from the peripherals interface **118**, converts the audio data to an electrical signal, and transmits the electrical signal to the speaker **111**. The speaker **111** converts the electrical signal to human-audible sound waves. The audio circuitry **110** also receives electrical signals convened by the microphone **113** from sound waves. The audio circuitry **110** converts the electrical signal to audio data and transmits the audio data to the peripherals interface **118** for processing. Audio data may be retrieved from and/or transmitted to memory **102** and/or the RF circuitry **108** by the peripherals interface **118**. In some embodiments, the audio circuitry **110** also includes a headset jack (not shown). The headset jack provides an interface between the audio circuitry **110** and removable audio input/output peripherals, such as output-only headphones or a headset with both output (e.g., a headphone for one or both ears) and input (e.g., a microphone).

The I/O subsystem **106** couples input/output peripherals on the device **100**, such as the touch screen **112** and other input/control devices **116**, to the peripherals interface **118**. The I/O subsystem **106** may include a display controller **156** and one or more input controllers I/O for other input or control devices. The one or more input controllers **160** receive/send electrical signals from/to other input or control devices **116**. The other input/control devices **116** may include physical buttons (e.g., push buttons, rocker buttons, etc.), dials, slider switches, joysticks, click wheels, and so forth. In some alternate embodiments, input controllers) **160** may be coupled to any (or none) of the following: a keyboard, infrared port, USB port, and a pointer device such as a mouse. The one or more buttons (e.g., **208**, FIG. **2**) may include an up/down button for volume control of the speaker **111** and/or the microphone **113**. The one or more buttons may include a push button (e.g., **206**, FIG. **2**). A quick press of the push button may disengage a lock of the touch screen **112** or begin a process that uses gestures on the touch screen to unlock the device, as described in U.S. patent application Ser. No. 11/322,549, "Unlocking a Device by Performing Gestures on an Unlock Image," filed Dec. 23, 2005, which is hereby incorporated by reference. A longer press of the push button (e.g., **206**) may turn power to the device **100** on or off. The user may be able to customize a functionality of one or more of the buttons. The touch screen **112** is used to implement virtual or soft buttons and one or more soli keyboards.

The touch screen **112** provides an input interface and an output interface between the device and a user. The display controller **156** receives and/or sends electrical signals from/to the touch screen **112**. The touch screen **112** displays visual output to the user. The visual output may include graphics, text, icons, video, and any combination thereof (collectively termed "graphics"). In some embodiments, some or all of the visual output may correspond to user-interface objects, further details of which are described below.

A touch screen **112** has a touch-sensitive surface, sensor or set of sensors that accept input from the user based on haptic and or tactile contact. The touch screen **112** and the display controller **156** (along with any associated modules and/or sets of instructions in memory **102**) detect contact (and any movement or breaking of the contact) on the touch screen **112** and converts the detected contact into interaction with user-interface objects (e.g., one or more soft keys, icons, web pages or images) that are displayed on the touch screen. In an exemplary embodiment, a point of contact between a touch screen **112** and the user corresponds to a finger of the user.

The touch screen **112** may use LCD (liquid crystal display) technology, or LPD (light emitting polymer display) technology, although other display technologies may be used in other embodiments. The touch screen **112** and the display controller **156** may detect contact and any movement or breaking thereof using any of a plurality of touch sensing technologies now known or later developed, including but not limited to capacitive, resistive, infrared, and surface acoustic wave technologies, as well as other proximity sensor arrays or other elements for determining one or more points of contact with touch screen **112**. A touch-sensitive display in some embodiments of the touch screen **112** may be analogous to the multi-touch sensitive tablets described in the following U.S. Pat. Nos.: 6,323,846 (Westerman et al.), 6,570,557 (Westerman et al.), and/or 6,677,932 (Westerman), and/or U.S. Patent Publication 2002/0015024A1, each of which is hereby incorporated by reference. However, a touch screen **112** displays visual output from the portable device **100**, whereas touch sensitive tablets do not provide visual output. The touch screen **112** may have a resolution in excess of 100 dpi. In an exemplary embodiment, the touch screen has a resolution of approximately 168 dpi. The user may make contact with the touch screen **112** using any suitable object or appendage, such as a stylus, a finger, and so forth. In some embodiments, the user interface is designed to work primarily with finger-based contacts and gestures, which are much less precise than stylus-based input due to the larger area of contact of a finger on the touch screen. In some embodiments, the device translates the

rough finger-based input into a precise pointer/cursor position or command for performing the actions desired by the user.

A touch-sensitive display in some embodiments of the touch screen **112** may be as described in the following applications: (1) U.S. patent application Ser. No. 11/381,313. "Multipoint Touch Surface Controller," filed on May 2, 2006; (2) U.S. patent application Ser. No. 10/840,862, "Multipoint Touchscreen," filed on May 6, 2004; (3) U.S. patent application Ser. No. 10/903,064, "Gestures for Touch Sensitive Input Devices," filed on Jul. 30, 2004; (4) U.S. patent application Ser. No. 11/048,264, "Gestures For Touch Sensitive Input Devices," filed on Jan. 31, 2005; (5) U.S. patent application Ser. No. 11,038,590, "Mode-Based Graphical User Interfaces For Touch Sensitive input Devices," filed on Jan. 18, 2005; (6) U.S. patent application Ser. No. 11/228,758, "Virtual Input Device Placement On A touch Screen User Interface," filed on Sep. 16, 2005; (7) U.S. patent application Ser. No. 11/228,700, "Operation Of A Computer With A Touch Screen Interface," filed on Sep. 16, 2005; (8) U.S. patent application Ser. No. 11/228,737, "Activating Virtual Keys Of A Touch-Screen Virtual Keyboard," filed on Sep. 16, 2005; and (9) U.S. patent application Ser. No. 11/367,749, "Multi-Functional Hand-Held Device," filed on Mar. 3, 2006. All of these applications are incorporated by reference herein.

In some embodiments, in addition to the touch screen, the device **100** may include a touchpad (not shown) for activating or deactivating particular functions. In some embodiments, the touchpad is a touch-sensitive area of the device that, unlike the touch screen, does not display visual output. The touchpad may be a touch-sensitive surface that is separate from the touch screen **112** or an extension of the touch-sensitive surface formed by the touch screen.

In some embodiments, the device **100** may include a physical or virtual click wheel as an input control device **116**. A user may navigate among and interact with one or more graphical objects (henceforth referred to as icons) displayed on touch screen **112** by rotating the click wheel or by moving a point of contact with the click wheel (e.g., where the amount of movement of the point of contact is measured by its angular displacement with respect to a center point of the click wheel). The click wheel may also be used to select one or more of the displayed icons. For example, the user may press down on at least a portion of the click wheel or an associated button. User commands and navigation commands provided by the user via the click wheel may be processed by an input controller **160** as well as one or more of the modules and/or sets of instructions in memory **102**. For a virtual click wheel, the click wheel and click wheel controller may be part of the touch screen **112** and the display controller **156**, respectively. For a virtual click wheel, the click wheel may be either an opaque or semitransparent object that appears and disappears on the touch screen in response to user interaction with the device. In some embodiments, a virtual click wheel is displayed on the touch screen of a portable multifunction device and operated by user contact with the touch screen.

The device **100** also includes a power system **162** for powering the various components. The power system **162** may include a power management system, one or more power sources (e.g., battery, alternating current (AC)), a recharging system, a power failure detection circuit, a power converter or inverter, a power status indicator (e.g., a light-emitting diode (LED)) and any other components associated with the generation, management and distribution of power in portable devices.

The device **100** may also include one or more optical sensors **164**. FIG. **1** shows an optical sensor coupled to an optical sensor controller **158** in I/O subsystem **106**. The optical sensor **164** may include charge-coupled device (CCD) or complementary metal-oxide semiconductor (CMOS) phototransistors. The optical sensor **164** receives light from the environment, projected through one or more leas, and converts the light to data representing an image. In conjunction with an imaging module **143**, the optical sensor **164** may capture still images or video. In some embodiments, an optical sensor is located on the back of the device **100**, opposite the touch screen **112** on the front of the device, so that the touch screen display may be used as a view finder for either still and/or video image acquisition. In some embodiments, an optical sensor is located on the front of the device so that the user's image may be obtained for video-conferencing while the user views the other video conference participants on the touch screen display. In some embodiments, the position of the optical sensor **164** can be changed by the user (e.g., by rotating the lens and the sensor in the device housing) so that a single optical sensor **164** may be used along with the touch screen display for both video conferencing and still and/or video image acquisition.

The device **100** may also include one or more proximity sensors **166**. FIG. **1** shows a proximity sensor **166** coupled to the peripherals interface **118**. Alternately, the proximity sensor **166** may be coupled to art input controller **160** in the I/O subsystem **106**. The proximity sensor **166** may perform as described in U.S. patent application Ser. Nos. 11/241,839, "Proximity Detector In Handheld Device," filed Sep. 30, 2005, and 11/240,738 "Proximity Detector In Handheld Device," filed Sep. 30, 2005, which are hereby incorporated by reference. In some embodiments, the proximity sensor turns off and disables the touch screen **112** when the multifunction device is placed near the user's ear (e.g., when the user is making a phone call). In some embodiments, the proximity sensor keeps the screen off when the device is in the users pocket, purse, or other dark area to prevent unnecessary battery drainage when the device is a locked state.

In some embodiments, the software components stored in memory **102** may include an operating system **126**, a communication module (or set of instructions) **128**, a contact/motion module (or set of instructions) **130**, a graphics module (or set of instructions) **132**, a text input module (or set of instructions) **134**, a Global Positioning System (GPS) module (or set of instructions) **135**, and applications (or set of instructions) **136**.

The operating system **126** (e.g., Darwin, RTXC, LINUX, UNIX, OS X, WINDOWS, or an embedded operating system such as VxWorks) includes various software components and/or drivers for controlling and managing general system tasks (e.g., memory management, storage device control, power management, etc.) and facilitates communication between various hardware and software components.

The communication module **128** facilitates communication with other devices over one or more external ports **124** and also includes various software components for handling data received by the RF circuitry **108** and/or the external port **124**. The external port **124** (e.g., Universal Serial Bus (USB), FIREWIRE, etc.) is adapted for coupling directly to other devices or indirectly over a network (e.g., the Internet, wireless LAN, etc.). In some embodiments, the external port is a multi-pin (e.g., 30-pin) connector that is the same as, or similar to and/or compatible with the 30-pin connector used on iPod (trademark of Apple Inc.) devices.

The contact/motion module **130** may detect contact with the touch screen **112** (in conjunction with the display controller **156**) and other touch sensitive devices (e.g., a touchpad or click wheel). The contact/motion module **130** includes various software components for performing various operations related to detection of contact, such as determining if contact has occurred, determining if there is movement of the contact and tracking the movement across the touch screen **112**, and determining if the contact has been broken (i.e., if the contact has ceased). Determining movement of the point of contact may include determining speed (magnitude), velocity (magnitude and direction), and/or an acceleration (a change in magnitude and/or direction) of the point of contact. These operations may be applied to single contacts (e.g., one finger contacts) or to multiple simultaneous contacts (e.g., "multitouch"/multiple finger contacts). In some embodiments, the contact/motion module **130** and the display controller **156** also detects contact on a touchpad. In some embodiments, the contact/motion module **130** and the controller **160** detects contact on a click wheel.

The graphics module **132** includes various known software components for rendering and displaying graphics on the touch screen **112**, including components for changing the intensity of graphics that are displayed. As used herein, the term "graphics" includes any object that can be displayed to a user, including without limitation text, web pages, icons (such as user-interface objects including soft keys), digital images, videos, animations and the like.

The text input module **134**, which may be a component of graphics module **132**, provides soft keyboards for entering text in various applications (e.g., contacts **137**, e-mail **140**, IM **141**, blogging **142**, browser **147**, and any other application that needs text input).

The GPS module **135** determines the location of the device and provides this information for use in various applications (e.g., to telephone **138** for use in location-based dialing, to camera **143** and/or blogger **142** as picture/video metadata, and to applications that provide location-based services such as weather widgets, local yellow page widgets, and map/navigation widgets).

The applications **136** may include the following modules (or sets of instructions), or a subset or superset thereof:

- a contacts module **137** (sometimes called an address book or contact list);
- a telephone module **138**;
- a video conferencing module **139**;
- an e-mail client module **140**;
- an instant messaging (IM) module **141**;
- a blogging module **142**;
- a camera module **143** for still and/or video images;
- an image management module **144**;
- a video player module **145**;
- a music player module **146**;
- a browser module **147**;
- a calendar module **148**;
- widget modules **149**, which may include weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, dictionary widget **149-5**, and other widgets obtained by the user, as well as user-created widgets **149-6**;
- widget creator module **150** for making user-created widgets **149-6**; and/or
- search module **151**.

Examples of other applications **136** that may be stored in memory **102** include memo pad and other word processing applications, JAVA-enabled applications, encryption, digital rights management, voice recognition, and voice replication.

In conjunction with touch screen **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, the contacts module **137** may be used to manage an address book or contact list, including; adding name(s) to the address book; deleting name(s) from the address book; associating telephone number(s), e-mail address(es), physical address(es) or other information with a name; associating an image with a name: categorizing and sorting names; providing telephone numbers or e-mail addresses to initiate and/or facilitate communications by telephone **138**, video conference **139**, e-mail **140**, or IM **141**; and so forth. Embodiments of user interfaces and associated processes using contacts module **137** are described further below.

In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch screen **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, the telephone module **138** may be used to enter a sequence of characters corresponding to a telephone number, access one or more telephone numbers in the address book **137**, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation and disconnect or hang up when the conversation is completed. As noted above, the wireless communication may use any of a plurality of communications standards, protocols and technologies. Embodiments of user interfaces and associated processes using telephone module **138** are described further below.

In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch screen **112**, display controller **156**, optical sensor **164**, optical sensor controller **158**, contact module **130**, graphics module **132**, text input module **134**, contacts list **137**, and telephone module **138**, the videoconferencing module **139** may be used to initiate, conduct, and terminate a video conference between a user and one or more other participants. Embodiments of user interlaces and associated processes using videoconferencing module **139** are described further below.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, the e-mail client module **140** may be used to create, send, receive, and manage e-mail. In conjunction with image management module **144**, the e-mail module **140** makes it very easy to create and send e-mails with still or video images taken with camera module **143**. Embodiments of user interfaces and associated processes using e-mail module **140** are described further below.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact module **130**, graphics module **132**, and text input module **134**, the instant messaging module **141** may be used to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol), to receive instant messages and to view received instant messages. In some embodiments, transmitted and/or received instant messages may include graphics, photos, audio files, video files and/or other attachments as are supported in a MMS and/or an Enhanced Messaging Service (EMS). Embodiments of user interfaces and associated processes using instant messaging module **141** are described further below.

In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact module **130**, graphics module **132**, text input module **134**, image management module **144**, and browsing module **147**, the blogging module **142** may be used to send text, still images, video, and/or other graphics

to a blog (e.g., the user's blog). Embodiments of user interfaces and associated processes using blogging module **142** are described further below.

In conjunction with touch screen **112**, display controller **156**, optical sensor(s) **164**, optical sensor controller **158**, contact module **130**, graphics module **132**, and image management module **144**, the camera module **143** may be used to capture still images or video (including a video stream) and store them into memory **102**, modify characteristics of a still image or video, or delete a still image or video from memory **102**. Embodiments of user interfaces and associated processes using camera module **143** are described further below.

In conjunction with touch screen **112**, display controller **156**, contact module **130**, graphics module **132**, text input module **134**, and camera module **143**, the image management module **144** may be used to arrange, modify or otherwise manipulate, label, delete, present (e.g., in a digital slide show or album), and store still and/or video images. Embodiments of user interfaces and associated processes using image management module **144** are described further below.

In conjunction with touch screen **112**, display controller **156**, contact module **130**, graphics module **132**, audio circuitry **110**, and speaker **111**, the video player module **145** may be used to display, present or otherwise playback videos (e.g., on the touch screen or on an external, connected display via external port **124**). Embodiments of user interfaces and associated processes using video player module **145** are described further below.

In conjunction with touch screen **112**, display system controller **156**, contact module **130**, graphics module **132**, audio circuitry **110**, speaker **111**, RF circuitry **108**, and browser module **147**, the music player module **146** allows the user to download and play back recorded music and other sound files stored in one or more file formats, such as MP3 or AAC files. In some embodiments, the device **100** may include the functionality of an MP3 player, such as an iPod (trademark of Apple Inc.). Embodiments of user interfaces and associated processes using music player module **146** are described further below.

In conjunction with RF circuitry **108**, touch screen **112**, display system controller **156**, contact module **130**, graphics module **132**, and text input module **134**, the browser module **147** may be used to browse the internet, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages. Embodiments of user interfaces and associated processes using browser module **147** are described further below.

In conjunction with RF circuitry **108**, touch screen **112**, display system controller **156**, contact module **130**, graphics module **132**, text input module **134**, e-mail module **140**, and browser module **147**, the calendar module **148** may be used to create, display, modify, and store calendars and data associated with calendars (e.g., calendar entries, to do lists, etc.). Embodiments of user interfaces and associated processes using calendar module **148** are described further below.

In conjunction with RF circuitry **108**, touch screen **112**, display system controller **156**, contact module **130**, graphics module **132**, text input module **134**, and browser module **147**, the widget modules **149** are mini-applications that may be downloaded and used by a user (e.g., weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, and dictionary widget **149-5**) or created by the user (e.g., user-created widget **149-6**). In some embodiments, a widget includes an HTML (Hypertext Markup Language) file, a CSS (Cascading Style Sheets) file, and a JavaScript file. In some embodiments, a widget includes an XML (Extensible Markup Language) file and a JavaScript file (e.g., Yahoo! Widgets). Embodiments of user interfaces and associated processes using widget modules **149** are described further below.

In conjunction with RF circuitry **108**, touch screen **112**, display system controller **156**, contact module **130**, graphics module **132**, text input module **134**, and browser module **147**, the widget creator module **150** may be used by a user to create widgets (e.g., turning a user-specified portion of a web page into a widget). Embodiments of user interfaces and associated processes using widget creator module **150** are described further below.

In conjunction with touch screen **112**, display system controller **156**, contact module **130**, graphics module **132**, and text input module **134**, the search module **151** may be used to search for text, music, sound, image, video, and/or other files in memory **102** that match one or more search criteria (e.g., one or more user-specified search terms). Embodiments of user interfaces and associated processes using search module **151** are described further below.

Each of the above identified modules and applications correspond to a set of instructions for performing one or more functions described above. These modules (i.e., sets of instructions) need not be implemented as separate software programs, procedures or modules, and thus various subsets of these modules may be combined or otherwise re-arranged in various embodiments. For example, video player module **145** may be combined with music player module **146** into a single module (e.g., an iPod module, not shown). In some embodiments, memory **102** may store a subset of the modules and data structures identified above. Furthermore, memory **102** may store additional modules and data structures not described above.

In some embodiments, the device **100** is a device where operation of a predefined set of functions on the device is performed exclusively through a touch screen **112** and/or a touchpad. By using a vouch screen and/or a touchpad as live primary input/control device for operation of the device **100**, the number of physical input/control devices (such as push buttons, dials, and the like) on the device **100** may be reduced.

The predefined set of functions that may be performed exclusively through a touch screen and/or a touchpad include navigation between user interfaces. In some embodiments, the touchpad, when touched by the user, navigates the device **100** to a main, home, or root menu from any user interface that may be displayed on the device **100**. In such embodiments, the touchpad may be referred to as a "menu button." In some other embodiments, the menu button may be a physical push button or other physical input/control device instead of a touchpad.

FIG. **2** illustrates a portable multifunction device **100** having a touch screen **112** in accordance with some embodiments. The touch screen may display one or more graphics. In this embodiment, as well as others described below, a user may select one or more of the graphics by making contact or touching the graphics, for example, with one or more fingers **202** (not drawn to scale in the figure). In some embodiments, selection of one or more graphics occurs when the user breaks contact with the one or more graphics. In some embodiments, the contact may include a gesture, such as one or more taps, one or more swipes (from left to right, right to left, upward and/or downward and/or a rolling of a finger (from right to left, left to right, upward and/or downward)

that has made contact with the device **100**. In some embodiments, inadvertent contact with a graphic may not select the graphic. For example, a swipe gesture with that sweeps over an application icon may not select the corresponding application when the gesture corresponding to selection is a tap.

The device **100** may also include one or more physical buttons, such as "home" or menu button **204**. As described previously, the menu button **204** may be used to navigate to any application **136** in a sot of applications that may be executed on the device **100**. Alternatively, in some embodiments, the menu button is implemented as a soft key in a GUI in touch screen **112**.

In one embodiment, the device **100** includes a touch screen **112**, a menu button **204**, a push button **206** for powering the device on/off anti locking the device, and volume adjustment button(s) **208**. The push button **206** may be used to turn the power on/off on the device by depressing the button and holding the button in the depressed state for a predefined time interval; to lock the device by depressing the button and releasing the button before the predefined time interval has elapsed; and/or to unlock the device or initiate an unlock process. In an alternative embodiment, the device **100** also may accept verbal input for activation or deactivation of some functions through the microphone **113**.

Attention is now directed towards embodiments of user interfaces ("UI") and associated processes that may be implemented on a portable multifunction device **100**.

FIG. **3** illustrates an exemplary user interface for a menu of applications on a portable multifunction device in accordance with some embodiments. In some embodiments, user interface **400** includes the following elements, or a subset or superset thereof:

- Signal strength indicator **402** for wireless communication;
- Time **404**;
- Battery status indicator **406**;
- Tray **408** with icons for frequently used applications, such as one or more of the following:
  - Phone **138**;
  - e-mail client **140**, which may include an indicator **410** of the number of unread e-mails;
  - Browser **147**; and
  - Music player **146**; and
- Icons for other applications, such as one or more of the following:
  - IM **141**;
  - Image management **144**;
  - Camera **143**;
  - Video player **145**;
  - Weather **149-1**;
  - Stocks **149-2**;
  - Blog **142**;
  - Calendar **148**;
  - Calculator **149-3**;
  - Alarm clock **149-4**;
  - Dictionary **149-5**; and
  - User-created widget **149-6**.

In some embodiments, UI **400** displays all of the available applications **136** on one screen so that there is no need to scroll through a list of applications (e.g., via a scroll bar). In some embodiments, as the number of applications increase, the icons corresponding to the applications may decrease in size so that all applications may be displayed on a single screen without scrolling. In some embodiments, having all applications on one screen and a menu button enables a user to access any desired application with at most two inputs, such as activating the menu button **204** and then activating the desired application (e.g., by a tap or other finger gesture on the icon corresponding to the application).

In some embodiments, UI **400** provides integrated access to both widget-based applications and non-widget-based applications. In some embodiments, all of the widgets, whether user-created or not, are displayed in UI **400**. In other embodiments, activating the icon for user-created widget **149-6** may lead to another UI (not shown) that contains the user-created widgets or icons corresponding to the user-created widgets.

In some embodiments, a user may rearrange the icons in UI **400**. e.g., using processes described in U.S. patent application Ser. No. 11/459,602, "Portable Electronic Device With Interface Reconfiguration Mode," filed Jul. 24, 2006, which is hereby incorporated by reference. For example, a user may move application icons in and out of tray **408** using finger gestures.

In some embodiments, UI **400** includes a gauge (not shown) that displays an updated account usage metric for an account associated with usage of the device (e.g., a cellular phone account), as described in U.S. patent application Ser. No. 11/322,552, "Account Information Display For Portable Communication Device," filed Dec. 23, 2005, which is hereby incorporated by reference.

FIGS. **4**A and **4**B illustrate an exemplary user interface displayed during an incoming call in accordance with some embodiments.

In some embodiments, if the incoming call is from a phono number that is associated with a person or other entry in the user's contact list, then the touch screen may display; the name **3102** of the person or entry; a graphic **3304** associated with the person or entry; a Decline icon **3106** that when activated (e.g., by a finger tap on the icon) causes the phone module to decline the call and/or initiate voicemail for the call; and an answer icon **3108** that when activated (e.g., by a finger tap on the icon) causes the phone module to answer the call (e.g., UI **3100**A, FIG. **4**A).

In some embodiments, if the incoming call is from a phone number that is not associated with a person or other entry in the user's contact list, then the touch screen may display: the phone number of the other party **3110**; a Decline icon **3106** that when activated (e.g., by a finger tap on the icon) causes the phone module to decline the call and/or initiate voicemail for the call; and an answer icon **3108** that when activated (e.g., by a finger tap on the icon) causes the phone module to answer the call (e.g., UI **3100**B, FIG. **4**B).

In some embodiments, the device pauses some other applications (e.g., the music player **146**, video player, and/or slide show) when there is an incoming call; displays UI **3100**A or UI **3100**B prior to the call being answered; displays UI **3000**B during the call; and terminates the pause on the other applications if the incoming call is declined or the call cuds. In some embodiments, there is a smooth transition into and out of a pause (e.g., a smooth lowering and raising of the sound volume for the music or video player).

FIGS. **5**A-**5**C illustrate an exemplary user interface for organizing and managing videos in accordance with some embodiments.

In some embodiments, in response to a series of gestures (e.g., finger taps) by the user, the device displays a series of video categories and sub-categories. For example, if the user activates selection icon **2101** (e.g., by a finger tap on the icon) or, in some embodiments, taps anywhere in the Playlist row **2108**, the UI changes from a display of video categories (UI **2100**A, FIG. **5**A) to a display of Playlist sub-categories (UI **2100**B, FIG. **5**B). In turn, if the user activates the

selection icon for My Movies (e.g., by a finger tap on the icon) or, in some embodiments, taps anywhere in the My Movies row **2110**, the UI changes from a display of Playlist sub-categories (UI **2100**B, FIG. **5**B) to a display of movie titles (UI **2300**C, FIG. **5**C) or movie subcategories (e.g., if the number of movie titles exceeds a threshold value, and there is more than one movie subcategory, movie subcategories may be shown). In some embodiments, videos that have not been viewed by the user are marked (e.g., by dot **2111**, FIG. **5**C).

In some embodiments, in response to a series of gestures (e.g., finger taps) by the user, the device navigates back up through the hierarchy of video categories and sub-categories. For example, if the user activates Playlists icon **2106** (e.g., by a finger tap on the icon), the UI changes from a display of My Movies sub-categories (UI **2100**C, FIG. **5**C) to a display of Playlist sub-categories (UI **2100**B, FIG. **5**B). In turn, if the user activates the Videos icon **2104** (e.g., by a finger tap on the icon), the UI changes from a display of Playlist sub-categories (UI **2100**B, FIG. **5**B) to a display of video categories (UI **2100**A, FIG. **5**A).

In some embodiments, the videos are displayed in a flat list when there are just a few unrelated video items in the list. But related video items are grouped into subcategories in the list when the related video items exceed a predefined threshold. For example, three episodes of a television show (e.g., "The Office") are shown separately in the flat list, but four or more episodes are grouped into a single subcategory titled "The Office" that is displayed in the otherwise flat list of video items. Similarly, three podcasts with a common publisher or three music videos by a common artist are shown separately in the flat list, but four or more related podcasts or four or more related music videos are grouped into a single subcategory that is displayed in the otherwise flat list of video items. Additional examples of this adaptive list hierarchy are described in U.S. Provisional Patent Application Nos. 60/937,992, "Portable Multifunction Device, Method, and Graphical User interface for Displaying User Interface Objects Adaptively," filed Jun. 29, 2007; 60/937,993, "Portable Multifunction Device." filed Jun. 29, 2007; 60/879,469, "Portable Multifunction Device," filed Jan. 8, 2007; and 60/879,253, "Portable Multifunction Device," filed Jan. 7, 2007, which are hereby incorporated by reference in their entirety.

In some embodiments, in response to user selection of a particular video (e.g., by a tap or other predefined gesture on the graphic, title, or anywhere **2112** in the row for a particular video), the device displays the selected video (e.g., King Kong) in a video player UI (e.g., UI **2300**A).

A user may delete videos, as described in U.S. Provisional Patent Application Nos. 60/883,814, "Deletion Gestures On A Portable Multifunction Device," filed Jan. 7, 2007) and Ser. No. 60/936,755, "Deletion Gestures On A Portable Multifunction Device," filed Jun. 22, 2007, which are hereby incorporated by reference in their entirety.

In some embodiments, in response to user selection of settings icon **2102** (e.g., by a finger tap on the icon), the device displays a settings UI (UI **2200**A, FIG. **6**A) for a video player.

FIGS. **6**A and **6**B illustrate an exemplary user interface for setting user preferences for a video player in accordance with some embodiments. In some embodiments, a user may make a tap or other predefined gesture anywhere in a row for a particular setting to initiate display of the corresponding setting choices. For example, in response to a tap **2202** on the Scale to fit setting (UI **2200**A, FIG. **6**A), the device displays the setting choices for scale to fit (UI **2200**B, FIG. **6**B).

In some embodiments, user interface **2200**B includes the following elements, or a subset or superset thereof:

- **402**, **404**, and **406**, as described above;
- Settings icon **2204** that when activated (e.g., by a finger tap on the icon) returns the device to the settings UI (e.g., UI **2200**A);
- Scale to fit icon **2206** that when activated (e.g., by a finger tap on the icon) sets the video player to scale the video to fit into the touch screen **112**, which may result in two horizontal black or blank hands at the top and bottom, of the display for wide-screen movies (or, more generally one or two bands of display space not used to display a movie or other video content);
- Scale to full icon **220**B that when activated (e.g., by a finger tap on the icon) sets the video player to fill the touch screen **112** with the video;
- Cancel icon **2210** that when activated (e.g., by a finger tap on the icon) returns the device to the previous UI (e.g., UI **2200**A) without saving any changes selected by the user; and
- Done icon **2212** that when activated (e.g., by a finger tap on the icon) saves the setting selected by the user and returns the device to the previous UI (e.g., UI **2200**A);

FIGS. **7**A and **7**B illustrate an exemplary user interface for a video player in accordance with some embodiments. In some embodiments, user interfaces **2300**A and **2300**B includes the following elements, or a subset or superset thereof:

- **402**, **404**, and **406**, as described above;
- Video region **2302** for displaying video content;
- Play icon **2304** that when activated (e.g., by a finger tap on the icon) initiates playing the video in video region **2302**, either from the beginning or from where the video was paused;
- Pause icon **2306** that when activated (e.g., by a finger tap on the icon) initiates pausing the video in video region **2302**;
- Lapsed time **2308** that shows how much of the video has been played, in units of time;
- Progress bar **2310** that indicates what fraction of the video has been played and that may be used to scroll through the video (or to the jump forward or back to user selected position in the video) in response to a user gesture;
- Remaining time **2312** that shows how much of the video remains to be played, in units of time;
- Exit icon **2314** that when activated (e.g., by a finger tap on the icon) initiates exiting the video player UI (e.g., UI **2309**A) and returning to another UI (e.g., UI **2100**C, FIG. **5**C; and
- Enlarged lapsed time **2318** that may appear in response to a predefined user gesture **2316** (or, alternately, any of a predefined set of user gestures) on or near the progress bar **2310**.

In some embodiments, in response to user selection of a particular video (e.g., by a tap or other predefined gesture on the graphic, title, or anywhere **2112** in the row for a particular video in UI **2100**C), the device displays the selected video (e.g., King Kong) in a video player UI (e.g., UI **2300**A). In some embodiments, the device automatically displays the video in landscape mode on the touch screen, rather than in portrait mode, to increase the size of the image on the touch screen.

In some embodiments, graphics other than the video **2302** (e.g., graphics **2304**, **2306** **2308**, **2310**, **2312**, and/or **2314**) may fade out if there is no contact with the touch screen **112** for a predefined time. In some embodiments, these graphics may reappear if contact is made with the touch screen, thereby producing a "heads up display" effect for these graphics. In some embodiments, for wide screen movies displayed in fit-to-screen mode, graphics may be displayed in the black horizontal bands above and below the video **2302**, to avoid obscuring the video.

In some embodiments, in response to a user gesture, the lapsed time in the video can be modified. For example, in response to the user's finger touching **2316** at or near the position in the progress bar **2310** corresponding to a current playback position, and then sliding along the progress bar **2310**, the lapsed time may be altered to correspond to the position of the user's finger along the progress bar. In some embodiments, enlarged lapsed time **2318** is displayed during this user gesture to indicate where the video will resume playing when the gesture ends or is completed (FIG. **7**B). In some embodiments, one or more still images from the video **2302** that correspond to where the video will resume playing are displayed as the user's finger is moved along the progress bar. This user gesture on the progress bar makes it easy for a user to select a particular scene in a video for viewing.

In the present document, the term "if" may be construed to mean "when," or "upon," or "in response to determining," or "in response to detecting," depending on the context. Similarly, the phrase "if it is determined" or "if [a stated condition or event] is detected" may be construed to mean "upon determining," or "in response to determining," or "upon detecting" the stated condition or event, or "in response to detecting" the stated condition or event, depending on the context.

FIG. **8**A is a flow diagram of a process **8000** for displaying video images in accordance with some embodiments. In some embodiments, the process **8000** is performed by a portable electronic device with a touch screen display. The device displays a list of video items in a portrait orientation of the touch screen display (**8002**) (e.g., as shown in FIGS. **5**A-**5**C, which are discussed in detail above). If a scrolling gesture comprising substantially vertical movement of user contact is detected (e.g., by contact/motion module **130**), the device responds to the scrolling gesture by scrolling the list of video items (**8004**). The device may then detect a predefined user gesture on the touch screen for selecting a respective video item (**8000**). In some embodiments, the predefined user gesture is a finger tap (e.g., **2112** in FIG. **5**C). In other embodiments, the predefined user gesture may be any other form of finger contact with the touch screen signifying selection of a video item.

When a user selects a respective video item in the list (with a finger tap or other predefined user gesture), the device automatically displays the user selected video item in a landscape orientation of the touch screen display (**8008**). In some embodiments, the automatic display of the video item occurs by the device displaying a rotation animation that transitions from displaying an image in the portrait orientation (e.g., FIG. **5**C) to displaying an image in the landscape orientation (**8010**) (e.g., FIG. **7**A). In other words, the display of the list of video items in a portrait orientation transitions to the display of the selected video item by displaying a rotation animation from the portrait orientation to the landscape orientation. In some embodiments, while the selected video item is being displayed, a user interactive progress bar is displayed upon detection of user contact with the touch screen display (**8012**).

Thus, the portable electronic device provides a portrait display orientation for displaying a list of videos, which permits a larger portion of the list to be viewed than if a landscape display orientation were used, and a landscape display orientation is provided for displaying a video, which more fully uses the display to show the video.

FIG. **8**B is a flow diagram of a process **8100** for displaying video images in accordance with some embodiments. In some embodiments, the process **8100** is performed by a portable multifunction device with a touch screen display. The process **8100** includes two modes of operations. The first mode of operation includes performing wireless telephony (**8102**) (e.g., with the telephone module **138**). The second mode of operation includes displaying, in a portrait orientation of the touch screen display, a list of video items (**8104**). The second mode of operation also includes, upon user selection of a respective video item in the list of video items, automatically displaying the user selected video item in a landscape orientation of the touch screen display (**8106**). In some embodiments, the selection of a respective video item is performed by a user contact with the touch screen display. The user contact may be a predefined gesture, such as a finger tap (e.g., **2112** in FIG. **5**C).

In some embodiments, when a telephone call is received on the device, display of the video item is paused and a telephone call interface is displayed on the touch screen display in the portrait orientation (**8108**). Upon completion of the telephone call, the video display returns (**8110**). The video may be paused (the display remains still) until play is resumed by the user (e.g., by touching or tapping the play icon **2304**, FIG. **7**A) or the video may automatically resume playing.

Thus, the portable multifunction device provides an intuitive, easy-to-use interface that integrates a video player with a wireless telephone.

FIG. **8**C is a flow diagram of a process **8200** for displaying video images in accordance with some embodiments. In some embodiments, the process **8200** is performed by a handheld electronic device with a touch screen display. The device displays a user selected video program on the touch screen display (**8202**). Upon detection of user contact with the touch screen display, a progress bar is displayed (**8204**) (e.g., **2310** in FIG. **7**A. If movement of a linger contact (e.g., **2316** in FIG. **7**B) from a first position in the progress bar corresponding to a current playback position to a second position in the progress bar is detected (**8206**), then playback of the video program is restarted at a position within the video program corresponding to the second position in the progress bar (**8208**). In some embodiments, index information (e.g., **2308** and/or **2318** in FIG. **7**B) corresponding to a current position of the finger contact within the displayed progress bar is displayed (**8210**).

A determination is made about whether a predefined amount of time (e.g., a value between 0.5 and 2.0 seconds, although larger or smaller values could also be used) has elapsed since the last finger contact with the touch screen was detected (**8212**). If the predefined amount of time has elapsed (**8212**—Yes), display of the progress bar ceases (**8214**). In other words, the progress bar fades out or otherwise disappears from the touch screen display. In some embodiments, if the progress bar disappears, the display size of the video program increases, but a predefined aspect ratio for displaying the video program is maintained. If the

predefined amount of time has not elapsed (**8212**—No), the progress bar continues to be displayed on the touch screen display.

In some embodiments, while the progress bar is being displayed, an elapsed video play time is also displayed (e.g., **2308** in FIG. **7**A). In other embodiments, while the progress bar is being displayed, a remaining video time is also displayed (e.g., **2312** in FIG. **7**A). In yet other embodiments, both an elapsed video play time and a remaining video play time are also displayed (**8216**).

In some embodiments, a user may temporarily pause a movie currently being played by selecting the pause icon **2306** (as shown in FIG. **7**B). The device keeps track of the last played location (also called the current playback location) in the movie. If the movie is paused for more than a predetermined time, the movie may be rewound in accordance to how long the movie has been paused. A predefined set or table of pause times and rewind amounts may be used to control this process. For example, if the movie is paused by more than X minutes (e.g., 5 minutes), the movie may be rewound by a first amount of time (e.g., one minute), and if the movie has been paused by more than Y minutes (e.g., 30 minutes), the movie may be rewound by a second amount of time (e.g., 2 minutes). When the movie is re-started, for example, by selecting the play icon **2304** (FIG. **7**A), the movie continues to play at the determined rewound location in the movie. In some embodiments, if the movie has been paused for more than a predetermined time (e.g., 48 hours, or any other appropriate value), the movie may be re-played from the beginning when it is re-started. In some embodiments, the automatic rewind feature described above, may be implemented on currently playing podcasts, or audio books as well.

Thus, the handheld portable device provides an intuitive, easy-to-use interface that uses a finger contact to find a desired portion of a video.

The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. An electronic device, comprising:
a touch screen display;
one or more processors;
a memory; and
one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:
initiating playback of media content;
during playback of the media content in a landscape orientation, detecting an incoming call;
in response to detecting the incoming call, pausing playback of the media content;
after detecting the incoming call, displaying, in a portrait orientation, a telephone call interface; and
in response to detecting termination of the incoming call, returning to display of the media content in the landscape orientation.

2. The electronic device of claim **1**, wherein playback of the media content includes displaying video content, and pausing playback of the media content includes pausing the video content.

3. The electronic device of claim **1**, wherein playback of the media content includes outputting audio content, and pausing playback of the media content includes pausing the audio content.

4. The electronic device of claim **1**, wherein the one or more programs further include instructions for:
in response to detecting the incoming call, displaying an incoming call user interface indicative of the incoming call.

5. The electronic device of claim **4**, wherein displaying the incoming call user interface includes concurrently displaying:
a decline icon that is selectable to decline the incoming call; and
an answer icon that is selectable to answer the incoming call.

6. The electronic device of claim **1**, wherein the one or more programs further include instructions for:
subsequent to pausing playback of the media content, detecting a termination of the incoming call; and
in response to detecting the termination of the incoming call, resuming playback of the media content.

7. The electronic device of claim **6**, wherein:
playback of the media content includes outputting audio content;
pausing playback of the media content includes gradually decreasing a volume of the audio content; and
resuming playback of the media content includes gradually increasing the volume of the audio content.

8. A non-transitory computer readable storage medium storing one or more programs, the one or more programs configured to be executed by one or more processors of an electronic device with a touch screen display, the one or more programs including instructions for:
initiating playback of media content;
during playback of the media content in a landscape orientation, detecting an incoming call;
in response to detecting the incoming call, pausing playback of the media content;
after detecting the incoming call, displaying, in a portrait orientation, a telephone call interface; and
in response to detecting termination of the incoming call, returning to display of the media content in the landscape orientation.

9. The non-transitory computer readable storage medium of claim **8**, wherein playback of the media content includes displaying video content, and pausing playback of the media content includes pausing the video content.

10. The non-transitory computer readable storage medium of claim **8**, wherein playback of the media content includes outputting audio content, and pausing playback of the media content includes pausing the audio content.

11. The non-transitory computer readable storage medium of claim **8**, wherein the one or more programs further include instructions for:
in response to detecting the incoming call, displaying an incoming call user interface indicative of the incoming call.

12. The non-transitory computer readable storage medium of claim **11**, wherein displaying the incoming call user interface includes concurrently displaying:
a decline icon that is selectable to decline the incoming call; and

an answer icon that is selectable to answer the incoming call.

13. The non-transitory computer readable storage medium of claim **8**, wherein the one or more programs further include instructions for:

subsequent to pausing playback of the media content, detecting a termination of the incoming call; and

in response to detecting the termination of the incoming call, resuming playback of the media content.

14. The non-transitory computer readable storage medium of claim **13**, wherein:

playback of the media content includes outputting audio content;

pausing playback of the media content includes gradually decreasing a volume of the audio content; and

resuming playback of the media content includes gradually increasing the volume of the audio content.

15. A method comprising:

at an electronic device with a touch screen display:

initiating playback of media content;

during playback of the media content in a landscape orientation, detecting an incoming call;

in response to detecting the incoming call, pausing playback of the media content;

after detecting the incoming call, displaying, in a portrait orientation, a telephone call interface; and

in response to detecting termination of the incoming call, returning to display of the media content in the landscape orientation.

16. The method of claim **15**, wherein playback of the media content includes displaying video content, and pausing playback of the media content includes pausing the video content.

17. The method of claim **15**, wherein playback of the media content includes outputting audio content, and pausing playback of the media content includes pausing the audio content.

18. The method of claim **15**, further comprising:

in response to detecting the incoming call, displaying an incoming call user interface indicative of the incoming call.

19. The method of claim **18**, wherein displaying the incoming call user interface includes concurrently displaying:

a decline icon that is selectable to decline the incoming call; and

an answer icon that is selectable to answer the incoming call.

20. The method of claim **15**, further comprising:

subsequent to pausing playback of the media content, detecting a termination of the incoming call; and

in response to detecting the termination of the incoming call, resuming playback of the media content.

21. The method of claim **20**, wherein:

playback of the media content includes outputting audio content;

pausing playback of the media content includes gradually decreasing a volume of the audio content; and

resuming playback of the media content includes gradually increasing the volume of the audio content.

* * * * *